EFFECTIVENESS OF CLINICAL PATHWAY FOR PARTURIENT MOTHERS UPON KNOWLEDGE AND PRACTICE OF NURSES AND MATERNAL OUTCOME

By

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A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

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DECLARATION

I hereby declare that the present dissertation entitled **"effectiveness of clinical pathway for parturient mothers Upon knowledge and practice of nurses And maternal outcome"** is the outcome of the original research work undertaken and carried out by me under the guidance of **Dr. LathaVenkatesan,** M.Scs (N)., M.Phil., Ph.D., Principal and professor, Apollo College of Nursing, Chennai. I also declare that the material of this has not found in any way, the basis for the award of any degree or diploma in this university or any other university.

II Year M.Sc (N)

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SYNOPSIS

A Quasi Experimental Study to Assess the Effectiveness of Clinical pathway for Parturient Mothers upon the Knowledge and Practice of Nurses and Maternal outcome at Apollo First Med Hospitals, Chennai.

The Objectives of the Study

1. To assess the pre and post-test level of knowledge and practice of nurses regarding clinical pathway for parturient mothers.
2. To evaluate the effectiveness of clinical pathway for parturient mothers upon the knowledge and practice of nurses.
3. To assess and compare the maternal outcome in control and experimental group of parturient mothers.
4. To determine the level of satisfaction of nursing care in the control and experimental groups of parturient mothers.
5. To determine the association between the selected demographic variables of nurses with their pre and post-test level of knowledge of parturient mothers.
6. To determine the association between the selected demographic variables with maternal outcome and level of satisfaction in control and experimental groups of parturient mothers.

7. To determine the association between the selected obstetric variables with maternal outcome and level of satisfaction in control and experimental groups of parturient mothers.

The conceptual frame work of the study was based on "King's Goal Attainment Theory". The study variables were effectiveness of clinical pathway for parturient mother. Null hypotheses were formulated. The level of significance selected was $p<0.001$. An extensive review of literature was made based on the opinions of the experts. A Quasi experimental study of one group pre-test and post-test design was used. The study included 12 nurses and 60 parturient mothers with selected purposive sampling technique out of which 30 were in the control group and were 30 in the experimental group. The study was conducted at Apollo First Med Hospitals, Chennai.

Demographic variable Proforma for nurses, demographic variable proforma for parturient mothers, obstetric variable proforma for parturient mothers, structured knowledge questionnaire, practice checklist, rating scale to assess the level of satisfaction and rating scale for maternal outcome for parturient mothers were the various tools used by the researcher. The validity was obtained from various experts and reliability was obtained through inter rater evaluation and found to be highly reliable. After pilot study the data for the main study was collected.

Structured knowledge questionnaire and practice check list was used for the nurses. The rating scale for level of satisfaction and maternal outcome were used for parturient mothers. Pre-test structured knowledge questionnaire regarding clinical pathway for

parturient mothers was administered to the nurses and observed the level of existing nursing practice through checklist. Assessed the maternal outcome for parturient mothers through checklist and their level of satisfaction with existing nursing practice through rating scale in control group. Then clinical pathway was implemented. After 7 days post- test structured knowledge questionnaire was administered to the same nurses and nursing practice was observed through checklist and the maternal outcome and their level of satisfaction was assessed through rating scale among experimental group of parturient mothers. The data obtained were analyzed using descriptive and inferential statistics.

Major findings of the study

- Majority of the nurses were at the educational qualification of B.Sc.Nursing(75%)., were living in the hostel (66.7%) with the income of about Rs.5000-7500 (58.3%) and information about clinical pathway (66.7%), Most of the nurses were at the age group of above 22-24years (75%) and married (66.7%) with working experiences< 1 years (50%).
- Most of the mothers in the control group and experimental group were between the age group of 24-30 years (73.3%, 73.3%), had graduate (53%, 83.3%), with monthly income about Rs.20001-40,000 (73.3%, 73.3%), Majority of the mother in both control and experimental group married at the age 20- 23 years (83.3%, 73.3%) and majority of mothers in both the group were home makers (76.7%, 73.3%) living as a joint family (66.7%,50%) respectively.
- Majority of the mothers in both the control and experimental group were between the gestational age of 39–40weeks (60%, 56.7%) and order of pregnancy were primi gravid

(60%, 100%) respectively. All the mothers in both the group had more than five antenatal visits (100%, 100%) and majority of them mothers undergone normal vaginal delivery (53.3%, 56.7%) with the 1st stage of labor less than 10 hours (46.67%, 50%) and 2nd stage of labor less than 1 hour (46.67%,53.33%).Majority of the mothers in the control and experimental group had no complication(80%, 86.7%) with no co-morbidity (93.3%, 93.3%) respectively.

- Most of the nurses (75%) had moderately adequate knowledge in pre-test.Post-test all the nurses (100%) had adequate knowledge.
- Both the control and experimental group of parturient mothers were having compliance of activities are moderate adequate and adequate practice (100%,100%), but there is significance difference between these groups.
- Majority of the parturient mothers in the control group (66.7%) had highly satisfied in the nursing care. In the experimental group, all the mothers (100%) had highly satisfied in the nursing care.
- Both the control and experimental group of parturient mothers were not developed any complications (100%).
- The mean and standard deviation of level of knowledge of nurses were low in the pre-test (M= 14.9, SD=2.5) in comparison to the post-test (M=21.6, SD-1.91), with the obtained‘t’ value of 10.27 ($p<0.001$). This clearly indicates that there is a significant difference in the knowledge of nurses after implementation of structured knowledge questionnaire on clinical pathway for parturient mother. Hence the null hypothesis Ho_1 is rejected.

- The mean and standard deviation of practice scores of nurses were high in the experimental group of parturient mothers (M= 298, SD=9.85) in comparison to the control group of parturient mothers (M=235.5, SD=4.9). This was statistically proven at $p<0.001$ level of confidence. This clearly indicates that there is a highly significant effectiveness of clinical pathway upon the nurses on parturient mothers. Hence the null hypothesis Ho_1 was rejected.
- Mean and standard deviation of level of satisfaction for parturient mothers in the experimental group (M= 78.9, SD=10.73) is high when compared to the control group (M=100.5, SD= 7.15). This was statistically proven at $p<0.001$ level of confidence and it shows that effectiveness of clinical pathway upon the level of satisfaction of the parturient mothers. Hence the null hypothesis Ho_2 was rejected.
- The mean and standard deviation of the maternal outcome of parturient mothers in the experimental group (M= 9.7, SD=5.2) is low when compared to the control group (M=2.7, SD= 3.5) which indicates the experimental group of mothers were not developed complications. This was statistically proven at $p<0.001$ level of confidence and it shows that effectiveness of clinical pathway upon the maternal outcome of the parturient mothers. Hence the null hypothesis Ho_2 was rejected
- There was no significant association between the selected demographic variables and the pre-test and post-test level of knowledge among nurses. Hence the null hypothesis Ho_3 was retained.

- There is no association between the demographic variables like age, religion, occupation and income per month with the maternal outcome in the control group and experimental group of parturient mothers. Hence null hypothesis Ho_4 was retained.
- There is no association between demographical variables like age, religion, educational qualification, and type of family with the level of satisfaction in the control and experimental group of parturient mothers. Hence the null hypothesis Ho_4 was retained.
- There is no association between obstetrical variables and the level of satisfaction in the control group and experimental of parturient mothers. Hence the null hypothesis Ho_5 was retained.
- There is no association between the obstetrical variables and the maternal outcome in both experimental and control group of parturient mothers. Hence the null hypothesis Ho_5 was retained.

Recommendations

- The same study can be conducted on a larger sample for better generalization.
- The study can be replicated in different settings
- A comparative study can be conducted between parturient mother and caesarian section mother.
- A comparative study can be conducted in different settings with similar facilities.

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Introduction

CHAPTER I

INTRODUCTION

BACKGROUND OF THE STUDY

Be great in act, as you have been in thought

-William Shakespeare

Each couple has the right duty and responsibility to control conception according to their circumstances. They are, in our view, free to use those means of birth control considered medically safe. As developing technologies have moved conception and reproduction more and more out of the category of a chance happening and more closely to the realm of responsible choice, the decision whether or not to give birth to children must include acceptance of the responsibility to provide for their mental, physical, and spiritual growth, as well as consideration of the possible effect on quality of life for family and society.

The physiological transition from being a pregnant woman to becoming a mother means an enormous change for each woman both physical and psychological. It is a time when every system in the body is affected and the experience, though unfortunately not joyous for all, represents a major occurrence in a woman's life. Pregnancy comes with some cost, however, for a pregnant woman needs also to be a responsible woman so as to best support the health of her future child. The growing fetus depends entirely on its mother's healthy body for all needs.

As per 2012 reported an average 1.5 billion women in the world have been childbearing age, i.e. between 15 to 45 years old. Approximately 6 million pregnancies every year in entire United States, 4,058,000 live births and. Where as in developing countries 182 million had pregnant, in spite of 64% were planned pregnancy. In developed countries total pregnancy rate is 28 million, in spite of 51% have planned pregnancy. The birthrate in Tamilnadu and Chennai in the year 2009 was 16.3/10000 births and 15.3/1000 births respectively.

For women and her family during Labour and birth is a rewarding field of nursing. The birth of a baby is more than a physical event. It has deep personal and social significance for the family. Family roles and relationship are forever altered by this event. The admission and assessment may confirm that woman is in true Labour, or true Labour may be evident after observation. Labour is "the presence of uterine contractions of sufficient frequency, duration, and intensity to cause demonstrable effacement and dilation of the cervix." Attempts to define the norms and limits of Labour duration have yielded variable results, undoubtedly because Labour does not readily lend itself to measurement. Not only is prospectively defining the onset of Labour a significant challenge, but evaluating its progression remains limited to rudimentary cervical examinations performed episodically.

In spite of measurement difficulties, a better understanding of the norms and slowest acceptable limits of Labour duration and rates of cervical dilation is important because this knowledge is the backbone of clinical decision-making in the intrapartum

setting. Optimally defining these indices from the point of typical spontaneous Labour admission forward is especially pertinent because, once admitted to the hospital, women are closely monitored to ensure adequate progress.

Midwives know and understand the women they are caring for, and where trust has grown between them, they will find it easier to respond to individual needs, to comfort and to encourage women through some of the difficulties, not only of pregnancy after the birth but also through Labour and birth. Women describe the importance of knowing their midwife, particularly during Labour and birth, and of the confidence and trust this bring.

The importance a society places on human life can best be measured by the concern it places on its most vulnerable members- its elderly, disadvantaged and youngest citizens. To promote consistency and ensure quality nursing care and outcomes in these areas, specialty organizations have developed guidelines for care in their specific areas of nursing practice. In maternal-child health, standards have been developed by the division of maternal-child health nursing practices of the American Nurses Association in ColLabouration with the Society of Neonatal Nurses (AWHONN)

Nursing care, at its best is designed and implemented in a thorough manner, using an organized series of steps, to ensure quality and consistency of care. The nursing process, a form of problem solving based on the scientific method, serves as basis for assessing, making a nursing diagnosis, planning, organizing and evaluating care. That the nursing process is applicable to all health care settings, from the prenatal clinic is proof that the method is broad enough to serve as the basis for nursing care.

The pathways are designed to be used in multidisciplinary workshops to explore alternative approaches to care. Importantly, many of the changes advocated are not resource intensive and focus instead on working differently. Providing the best care in the first pregnancy and Labour is crucial, as women who have a normal birth from their first pregnancy are likely to do so again. Important features of this pathway include supporting and preparing women for Labour and a belief that 'all pregnancies are normal unless proven otherwise' alongside the need for consistent, balanced information setting out the known risks and benefits of all modes of birth.

Clinical pathways were introduced in the early 1990s in the UK and the USA, and are being increasingly used throughout the developed world. Clinical pathways are structured multidisciplinary plans of care designed to support the implementation of clinical guidelines and protocols. They are designed to support clinical management. They provide detailed guidance for each stage in the management of a patient with a specific condition over a given time period, and include progress and outcome details.

During the clinical exposure, the researcher has observed the existing nursing practice of the obstetric clients during their antenatal and intranatal period the researcher found that the nursing care given was not in the timely manner because of her practice was less compare to current practice of parturient care. The parturient mothers in the present world are in need of reduced risk with better maternal outcome and lesser cost. Clinical pathway has become one way to reduce unnecessary resource consumption by reducing

provider variance, improving clinical outcomes, and reducing cost. Thus the researcher thought that clinical pathway would help in fulfilling the mother's expectation and thus interested in doing this study.

Need for the Study

Pregnancy and child birth are the two vital events in the life of a woman. During pregnancy, pregnant women require special care because it brings double health benefits, first to her and the baby as a product of her pregnancy. Through pregnancy and child birth are natural processes, they are not risk free major complication. Where midwives were hospital based they were organized on a model of acute care nursing. Thus care became highly fragmented. In addition, as maternity care became more and more technical and medical in its nature

A national audit conducted in India from 2004-2006, found that only 47% of deliveries avoided medical intervention of any sort that includes avoiding the use of instruments, induction, epidural or general anesthetics. Other findings of the audit include over 20% of deliveries were induced, 23.3% of deliveries were by caesarean section, more than half of them were emergency cesareans and 11% were instrumental deliveries. Women with spontaneous deliveries spent on average one day in hospital after delivery, women with instrumental deliveries one or two days, women with caesarean deliveries between two and four days, 14% of women had on episiotomy. Thus the length of hospital stay for the women undergoing Labour can be reduced by promoting natural mode to delivery.

Clinical pathways are structured multidisciplinary care plans which detail essential steps in the care of patients with a specific clinical problem. They support the translation of clinical guidelines into local protocols and their subsequent application to clinical practice. Clinical pathways are structured multidisciplinary care plans which detail essential steps in the care of patients with a specific clinical problem. They support the translation of clinical guidelines into protocols and their subsequent application to clinical practice. The entire country has become more concerned with healthcare costs due to managed care, capitation risk-based contracts, and the near elimination of the cost-plus reimbursement system.

Labour ward staff having a shared philosophy and communicating well in multidisciplinary forums are helpful in improving the culture of busy Labour wards. Improvement of multidisciplinary communication should be actively sought. Risk management issues and statutory supervision must be dealt with in a way that positively develop and supports staff. These groups if been utilizing the health care unit effectively would have helped them in fulfilling their wish of giving birth to a baby. A nurse can effectively provide care during parturient mothers.

Randsom et al., (1998) conducted on study to retrospectively identified 290 delivery-related (diagnosis-related groups 370-374) malpractice claims and 262 control deliveries at the health system during the period from 1988 to 1998. The findings compared rates of non-compliance with the pathways in the claims and control groups, calculated at odds ratio for increased risk of being sued given departure from the guideline standards,

and calculated the elevated risk of litigation introduced by noncompliance and compared the frequencies of different types of departures across claims and control groups.

So far, in recent past, no such study has been done in India to determine the adequacy of parturient practices and no structured clinical pathway practice regularly. Hence the investigator felt that it is essential to practice the clinical pathway for parturient mother. Based on this a clinical pathway was developed to educate nurses on parturient mother after evaluating its effectiveness through a quasi- experimental study.

Statement of the Problem

A Quasi Experimental Study to Assess the Effectiveness of Clinical pathway for Parturient Mothers upon the Knowledge and Practice of Nurses and Maternal outcome at Apollo Fist Med Hospital, Chennai.

Objectives of the Study

1. To assess the pre and post- test level of knowledge and practice of nurses regarding clinical pathway for parturient mothers.
2. To evaluate the effectiveness of clinical pathway for parturient mothers upon the knowledge and practice of nurses.
3. To assess and compare the maternal outcome in control and experimental group of parturient mothers with.
4. To determine the level of satisfaction of nursing care in the control and experimental groups of parturient mothers.

5. To determine the association between the selected demographic variables of nurses with pre and post-test level of knowledge of parturient mothers.
6. To determine the association between the selected demographic variables with maternal outcome and level of satisfaction in control and experimental groups of parturient mothers.
7. To determine the association between the selected obstetric variables with maternal outcome and level of satisfaction in control and experimental groups of parturient mothers.

Operational Definitions

Effectiveness

In this study effectiveness refers to the difference between the pre test and post test knowledge and practice scores of control and experimental group of nurses on clinical pathway for parturient mothers. The effectiveness is also measured by comparing the control and experimental group of parturient mothers outcome in terms of their length of stay, prevention of complications and satisfaction.

Clinical pathway

It is an algorithm developed by the researcher which will be used by the nurse as a guiding tool for providing care of parturient mothers.

Parturient mother

It refers to the mother who is in labour process from the time of admission still to 4^{th} stage of Labour.

Clinical pathway for parturient mothers

In this study it refers to the guidelines for nursing care of parturient mother undergoing for 1st stage to 4th stage of Labour including 12-18 hours of parturient care that is formulated by the researcher based on the fourteen basic needs of Henderson's. The aspects included are clinical assessment, breathing, regulatory functions, nutrition, elimination, position, comfort, personal hygiene, safety, communication, spiritual, activity, emotional support, health education and rest. Nursing interventions are listed under each aspects and based on this the nurses will be giving care to the parturient mothers.

Knowledge

It refers to the level of understanding and awareness of nurses regarding clinical pathway for parturient mothers as measured by researcher using structured knowledge questionnaire on clinical pathway for parturient mothers.

Practice

It refers to nursing care provided by the nurses for parturient mothers and is measured in terms of compliance with clinical pathway by the researcher.

Nurses

In this study it refers to a person who is a registered nurse qualified with general and midwifery (GNM) or B.Sc Nursing degree working in Labour ward and provides care to the parturient mothers.

Outcome

In this study it refers to length of stay in the hospital, prevention of complications and the satisfaction of mothers regarding nursing care.

Assumptions

- In everyday's life, health care's facing many challenges to provide quality care through multi-disciplinary to the clients.
- Managed care will reduce hospital stays and improve treatment outcome.
- A clinical pathway helps to co-ordinate health care services.
- There is no existing practice of clinical pathway for parturient mother.
- A clinical pathway helps to improve quality of care on parturient mothers.

Null Hypotheses

Ho_1 There will be no significant difference between pre and post-test level of knowledge and practice of nurses regarding clinical pathway for parturient mothers.

Ho_2 There will be no significant difference in the maternal outcome and level of satisfaction between the control and experimental group of parturient mothers.

Ho_3 There will be no significant association between selected demographic variables with their pre and post-test level of knowledge among nurses regarding clinical pathway for parturient mothers.

Ho_4 There will be no significant association between selected demographic variables with maternal outcome and the level of satisfaction in control and experimental group of parturient mothers.

Ho_5 There will be no significant association between selected obstetric variables with maternal outcome and the level of satisfaction in control and experimental group of parturient mothers.

Delimitations

The study was limited to the nurses who are

- working at Apollo first med hospitals, Chennai.
- willing to participate in the study
- able to understand English

The study was limited to the mothers who are

- underwent normal and assisted vaginal delivery
- willing to participate

Projected Outcome

The study will help to improve the knowledge and practice of nurses regarding clinical pathway for parturient mother as well as the maternal outcome in terms of duration of Labour, prevention of complications and maternal satisfactions.

Conceptual Framework

The conceptual framework deals with the interrelated concepts that are assessable together in some rational scheme by virtue of their relevance to a common theme (Polit and Beck, 2010).

Conceptual framework of present study is based on "**King's Goal Attainment Theory".** According to Imogene King- Nursing is defined as the process of action, reaction, interaction, whereby nurses and clients share the information about their perception. Through perception and communication they identified the problem through which they set goals and take necessary action

King's goal attainment theory is based on the concepts of personal, interpersonal and social systems including perception, judgement, action, reaction, interaction, transaction and perception.

Perception

A person imports energy from the environment and transforms, processes and stores it. The study assumes that there is an interpersonal relationship between the nurse investigator and participants. The nurse investigator perceives that there is a need for the development of clinical pathway for parturient mothers based on rating scale on satisfaction on nursing care. It imposes a demand for clinical pathway for parturient mothers.

Judgement

Analyze the areas of action to be carried out. In this study the nurse investigator judges that clinical pathway based on basic needs may improve the maternal satisfaction, reduce the duration of Labour, reduce the complications and reduce the health care cost. Thus the researcher takes decision to implement the clinical pathway.

Action

Individuals export the perceived energy, as demonstrated by observable behaviors by taking physical activity. Nurse investigator takes action or actual development on clinical pathway. The parturient mother in the control group were moderately satisfied and parturient mother in the experimental group were highly satisfied with the nursing care and no complications developed.

Reaction

Reaction means developing action and acting on perceived choices for goal attainment. The implementations of clinical pathway in experimental group parturient mothers were highly satisfied and the control group parturient mothers were moderately satisfied. The nurse investigator makes the arrangement for disseminating the information regarding clinical pathway for nurses and in turn the patient were benefited.

Interaction

Refers to verbal and nonverbal behavior between an individual and the environment or among two or more individuals. It involves goal directed perception and communication.

Action leads to interaction where the nurse investigator executes her clinical pathway for parturient mothers and thereby the maternal benefited.

Transaction

Imogene King says that the transaction is two individuals mutually identify goals and the means to achieve them. They reach an agreement about how to attain these goals and then set about to realize them.

In this study subjects from the experimental group shows highly satisfactory in nursing care and developed no complications. Moderate levels of satisfaction are maintained in the control group.

Feedback

Outcome may either be satisfactory or unsatisfactory. Satisfactory shows the effectiveness of clinical pathway and for unsatisfactory the activity is planned again. In this study investigator appraise the level of satisfaction on nursing care through rating scale, if clinical pathway is satisfactory it can be disseminated and implemented to the control group too. If unsatisfactory the activity is planned again or other best method is adopted.

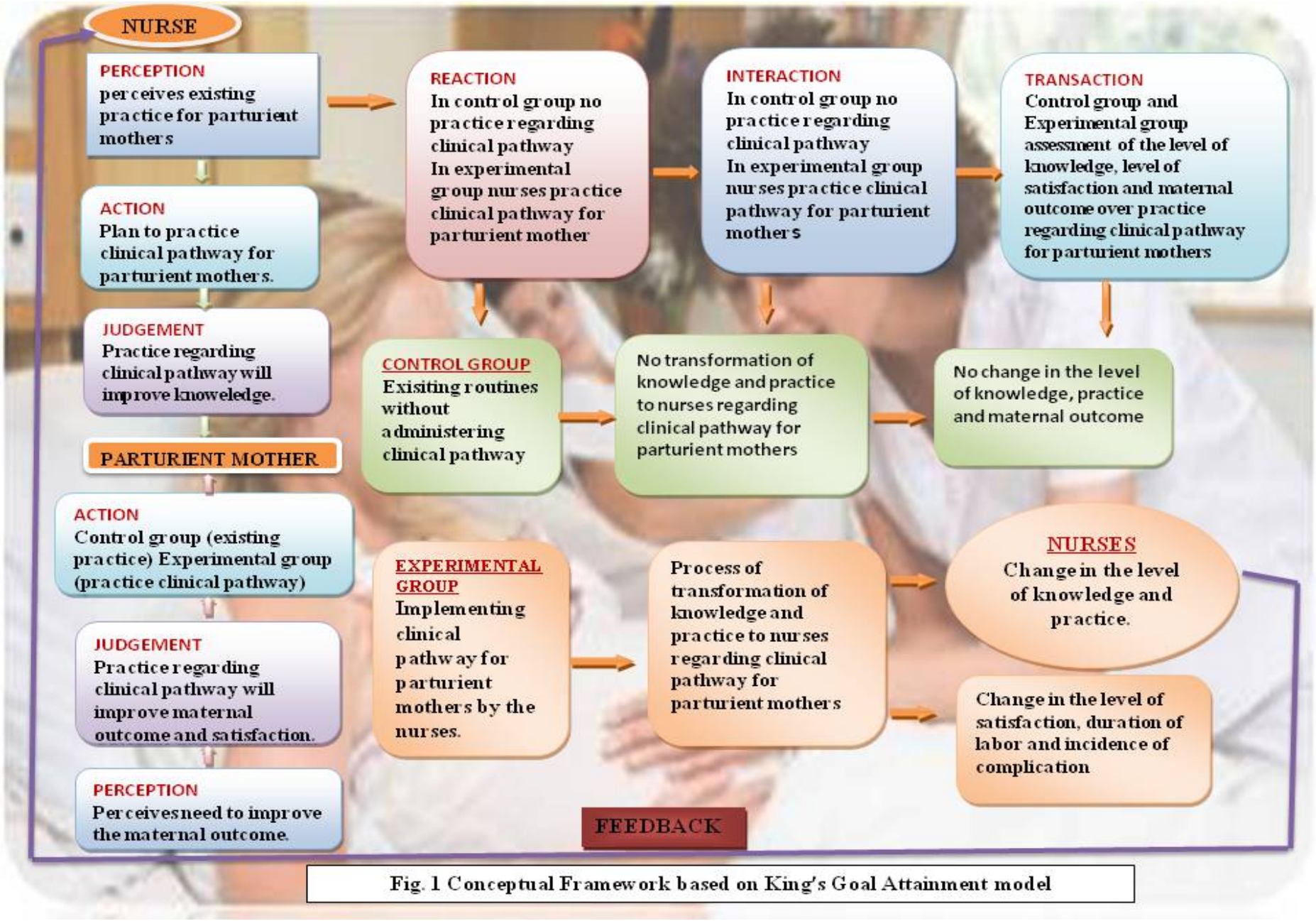

Fig. 1 Conceptual Framework based on King's Goal Attainment model

Summary

This chapter has dealt with background of the study, need for the study, statement of the problem, objectives of the study, operational definitions, assumptions, null hypothesis, delimitations and conceptual framework.

Organization of the Report

Further aspects of the study are presented in the following chapters.

Chapter II consists of review of literature

Chapter III consists of research methodology which includes research approach, research design, setting, population, and sample, sampling technique, tools used in the study, data collection procedure and plan for data analysis.

Chapter IV deals with analysis and interpretation of data done through descriptive and inferential statistics.

Chapter V has Discussion

Chapter VI consists of summary, conclusion, implications, recommendations and limitations.

Chapter II

Review of literature

CHAPTER –II

REVIEW OF LITERATURE

A literature review is an organized written presentation of what has been published on a topic by scholars. (Burns & Groove, 2004)

This chapter deals with a review of published and unpublished research studies and from related material for the present study. The review helped the researcher to develop an insight into problem area. This helped the researcher in building the foundation of the study.

The review of literature in this chapter has been presented under the following headings:-

- Literatures related to Labour
- Literatures related to Clinical pathway
- Literatures related to clinical pathway for Parturient mother

Literature Related to Labour

Peng et al., (2011) highlighted in his study was to investigate the effects of Labour and associated pain on differential gene expression profiles in the maternal, fetal, and placental compartments. Labour and its associated pain are thought to have unique impacts on parturient women. The up regulated genes in the MB of the Labouring group are involved in cytokine and nuclear factor-kappa B signaling pathways, regulation of the networks of toll-like receptor 4, and suppressor of cytokine signaling 3. Interestingly, few

of the genes exhibited simultaneous changes in all three compartments, indicating that different pathways and complex interactions may be involved in human Labour. In human Labour and its associated pain elicit unique gene regulatory changes in MB, placenta, and CB.

A randomized controlled trial (2010) was conducted by Segal, with Women in Labour who receive epidural analgesia are more likely to experience hyperthermia and overt clinical fever. The gradual development of modest hyperthermia observed in Labouring women with epidural analgesia is not seen in those electing other forms of analgesia or unmediated Labour. However, even randomized trials have confirmed a higher incidence of fever in epidural-exposed women, suggesting a causal relationship. The result showed there was no safe and effective means to inhibit epidural-associated fever.

To find out the Epidural analgesia is effective for pain control and should not be discontinued late in Labour to reduce the need for operative vaginal delivery was conducted by Patterson, Winslow and Matus (2008). Management guided by current knowledge of the relevant screening tests and normal Labour process can greatly increases the probability of an uncomplicated delivery and postpartum course. Epidurals prolong Labour, but do not increase the risk of cesarean delivery. Routine episiotomy increases morbidity and should be abandoned. Once the infant has been delivered, active management of the third stage of Labour decreases the risk of postpartum hemorrhage.

A retrospective exploratory study (2007) was used to survey 39 registered nurses and 419 nurse-patient dyads by Saul's, to understand the relationship between predictor

variables, behavioral intention, and health outcomes. Multiple regression analysis was used for statistical analysis. Although behavioral intent had no significant influence on behavior, as measured by the patient's length of Labour, clinical significance needs to be addressed. The regression correlation suggested that as the behavioral intent scores increased, length of Labour decreased in the nurse's parturient population.

In the year 2006, Meta-analysis was performed by Scrabotto and Riesco to find out the prevention of perineal trauma in normal birth. To relate height of the perineum, duration of the second stage of Labour, variation of the position of the head detaching, kind of effort, presence of the umbilical cord around the babies' neck, birth weight and vulva's ardor to urinate with the occurrence of perineal laceration. With a sample consisting of 67 women in Labour without previous vaginal births. The results demonstrated that there were no significant statistical differences between the variables verified.

A prospective, longitudinal study took place at the Prince Hashem and Prince Ali Military Hospitals, Amman, Jordan from December 2002 to March 2003. Fifty-four women were scanned on postpartum days 1, 7, 14, 28, and 56. Ultrasound examination was performed trans abdominally for all women. The involution process of the uterus was assessed by measuring the anteroposterior diameter and uterine cavity. The appearance of the uterine cavity contents was documented. No correlation was found between the involution of the uterus and parity, breast-feeding and the infant's birth weight (Al-bdour, Akasheh, &Al-Husban 2004).

The participants in this study were 90 primiparas having normal childbirths at the Department of Obstetrics, Chi-Mei Medical Center in southern Taiwan between September 1999 and June 2000. The perceived intensity of Labour pain was measured using the visual analogue scale for pain and the present behavioral intensity score in the latent phase (cervix dilated 3-4 cm), active phase (cervix dilated 5-7 cm), and transitional phase (cervix dilated 8-10 cm). These findings suggest that primipara' perceived Labour pain is correlated with psychogenic rather than physical factors (Chang, Chen, & Chen-2002).

Chalmers(2001),highlighted in his article on the intention of the "Bologna score" is to quantify, both in an individual Labour and in a wider population, the extent to which Labours have been managed as if they are normal as opposed to complicated. In this way it may be possible to assess both attitudes and practices within a maternity service toward the effective care of normal Labour. This describes conceptual development of the scale. Recommendations for future evaluation of the Bologna score's validity and potential include field testing globally, comparison with the Apgar score, and evaluation of the relative weight contributed by each of the five measures comprising the Bologna score.

Literature related to clinical pathway

In a prospective, randomized controlled pilot study a conservative and fast track treatment regimen in patients undergoing lung resections was conducted by Muehling et al.(2008). Main differences between the two groups consisted in preoperative fasting (6 h vs. 2 h) and analgesia (patient controlled analgesia vs. patient controlled epidural

analgesia).Both study groups were similar in terms of age, sex, preoperative forced expiratory volume in one second (FEV_1). Overall morbidity was not significantly different (46% vs. 26%, $p = 0.172$), mortality was comparable in both groups (4% vs. 3%). The results concluded that the implementation of an optimized perioperative treatment in lung surgery in order to reduce pulmonary complications after major lung surgery.

Leob (2006) used a Treatment in nursing homes according to a clinical pathway, which included use of oral antimicrobials, portable chest radiographs, oxygen saturation monitoring, rehydration, and close monitoring by a research nurse, or usual care. Hospital admissions, length of hospital stay, mortality, health-related quality of life, functional status, and cost. Thirty-four (10%) of 327 residents in the clinical pathway group were hospitalized compared with 76 (22%) of 353 residents in the usual care group. There were no significant differences between the groups in health-related quality of life or functional status. The clinical pathway resulted in an overall cost savings of US $1016 per resident (95% CI, $207-$1824) treated.

In the year 2006 an experimental research to evaluate the effect of a care map and nursing case management on patient satisfaction and staff job satisfaction, colLabouration, and autonomy was conducted by Good et.al. The patients who had a Care map and a nurse case manager were more satisfied with their care. The multidisciplinary staff who worked on the experimental unit had increased job satisfaction and nurses who applied and were selected for case management positions had higher levels of colLabouration and increased autonomy. Multidisciplinary team members who developed the Care map also had higher

levels of colLabouration than other multidisciplinary staff on the experimental unit and their job satisfaction with quality of care increased under this new care delivery system.

A retrospective analysis of 207 infants managed without a pathway in three regional and one tertiary hospital was conducted by Cheney and Louise (2005).There were no differences between groups in demographic factors or clinical severity. The pathway had no effect on length of stay or time in oxygen. Readmission to hospital was significantly lower in the pathway group (P = 0.001). Administration of supplemental fluids (P = 0.001) and use of steroids was lower (P = 0.005) in the pathway group. Identification of parental smoking status was higher in the pathway group (P = 0.029). Data from the pathway demonstrated that boys were three times more likely to return to oxygen after weaning to air (OR = 3.30; 95%CI 1.39 - 7.81) after adjusting for admission oxygen saturation. Documentation of variances from the pathway was misunderstood by staff.

Koval et al., (2004) conducting a retrospective study, on technical advances in the treatment of the elderly have resulted in improved fracture fixation and surgical outcomes, clinical pathways have been developed to further improve patient outcome while shortening hospital length of stay after hip fracture. We describe the clinical pathway used since 1990 at the Hospital for Joint Diseases. The outcomes of 747 patients treated before 1990 were compared with outcomes of 318 patients treated at our hospital after initiation of the clinical pathway. Use of the clinical pathway was associated with significant decreases in the acute care hospital length of stay, in hospital mortality, and 1-year mortality.

In a Prospective study of patients admitted 12 months before and after implementation of a care pathway for the management of femoral neck fractures by Roberts (2004). Audit data for corresponding time periods from nearby orthopedic units was used to control for secular trends. mean length of stay increased by 6.5 days (95% confidence interval 3.5–9.5 days, $P < 0.0005$) in the second period with a significant improvement in ambulation on discharge (odds ratio 1.6, 95% confidence interval 1.0–2.6, $P = 0.033$) and a trend towards reduction in admission to long term care (odds ratio 0.6, 95% confidence interval 0.3–1.0, $P = 0.058$). This care pathway was associated with longer hospital stay and improved clinical outcomes. Care pathways for hip fracture patients can be a useful tool for raising care standards but may require additional resources.

In a retrospective cohort study design examined complications, readmissions, morbidity and mortality, and function scores in two groups of patients attended by the same surgeon for the year before and the year after the implementation of an outcomes management program with clinical pathways for patients undergoing total knee arthroplasty at an academic health center. The effectiveness of the pathway constantly was adjusted using variance analysis and continuous quality improvement techniques. The application of clinical pathways, variance analysis, and continuous quality improvement toward the treatment of patients who had total knee arthroplasty at an academic health center resulted in significant savings in length of stay without adversely affecting overall outcome. (Mabrey1997)

Literatures related to Clinical Pathway for Parturient Mothers

An Analytic- cross sectional study to confirms that different factors predict the multidimensionality of childbirth satisfaction was conducted by Abdel and Berggren (2011). A random sample of 400 women were recruited in the present study with the following criteria; age ranged between 20-30 years old, can read and write, primigravida, nulliparous woman with singleton low risk pregnancies, in the third trimester, up to 37 weeks of gestational age, no previous abortion and free from any medical complains. Despite good general coverage of Labour care among women, there were clear variations in the type of management given to them or needed by them.

In the year 2011, an ethnographic approach was used to observe use of the Normal Labour Pathway in real life settings and evaluate its implementation. Data were collected by means of semi participant observation, focus groups, and interviews. Participants ($n = 56$) included senior practitioners involved in creating the pathway ($n = 4$), midwives ($n = 41$), managers ($n = 5$), and doctors ($n = 6$). Midwives and doctors considered that the Normal Labour Pathway had increased interprofessional tensions. There was no evidence that it had increased the normal birth rate. (Hunter and Segrott)

Green, et al (2011) this article is a report of a study of women's experiences of, and satisfaction with, telephone communications within the All Wales Clinical Pathway for Normal Labour. The Pathway was introduced throughout Wales over 2003–2004. Its philosophy emphasizes the desirability of a woman remaining at home until labour is established with assessment by telephone, in contrast to the more common scenario where

the phone call is a precursor to admission and face-to-face assessment. Women were not well prepared for the Pathway; however, satisfaction was more strongly related to interpersonal interactions with midwives. Dissatisfied women reported unclear advice, unmet needs, unaddressed anxieties and negative midwife manner. 'Very satisfied' women were distinguished by feeling welcome to attend the maternity unit and by the perceived adequacy of the advice given.

Wanyonyi and Karuga **(2010) conducted a retrospective study on evaluate the** utility of clinical care pathways in determining perinatal outcomes for women with one previous caesarean section. A total of 215 women with one previous caesarean section were followed up using a standard care pathway. The Outcome measures included are the proportion of eligible women who opted for test of scar proportion. The rising rates of primary caesarean section have resulted in a larger obstetric population with scarred uteri. Subsequent pregnancies in these women are risk-prone and may complicate. Besides ensuring standardised management, care pathways could be used to evaluate for perinatal outcomes in these high risk pregnancies. This study demonstrate the use of a care pathway for vaginal birth after caesarean section as a service evaluation tool to determine perinatal outcomes

The implementation of the pathway resulted in a number of anticipated benefits, including increased midwifery confidence in skills to support normal birth and promotion of team working. Women were unaware their care was informed by a care pathway. Care pathways are complex interventions which generate a number of consequences for practice.

Those considering introduction of pathways need to ensure all relevant stakeholders are engaged with this and develop robust evaluation strategies to accompany implementation. (Bick, 2009)

Randsom et al. (1998) conducted on study to retrospectively identified 290 delivery-related (diagnosis-related groups 370-374) malpractice claims and 262 control deliveries at the health system during the period from 1988 to 1998. Clinical pathways for vaginal and cesarean delivery implemented in 1998 were used as a standard of care. We compared rates of non-compliance with the pathways in the claims and control groups, calculated at odds ratio for increased risk of being sued given departure from the guideline standards, and calculated the elevated risk of litigation introduced by noncompliance. We also compared the frequencies of different types of departures across claims and control groups.

Summary

This chapter deals with the review of literature related to the problem stated. The literatures were taken from the 22 primary sources. It helped the researcher to develop tools, collect data, organize and analyze the data.

Chapter III

Research Methodology

CHAPTER- III

RESEARCH METHODOLOGY

This chapter deals with the methodology adopted by the researcher for the study includes research approach, research design, the setting, population, sample and sampling techniques, development and description tool, validity, reliability, pilot study, data collection procedure, plan for data analysis.

Research Approach

According to Polit & Beck (2010) experimental research the investigator controls the independent variable and randomly assigns subjects to different conditions. An experimental research is generally applied where the primary objective is to determine the extent to which a given procedure meets the desired result. In this study as the researcher wanted to assess the effectiveness of clinical pathway for parturient mothers, the experimental approach seemed to be the most appropriate approach.

Research Design

The Research design is the overall plan for obtaining answers to the questions being studied and for handling some of the difficulties encountered during the research process (Polit & Beck 2010). A one group pre-test and post-test, which is Quasi-experimental in nature, was adopted for conducting the study. In this study, the investigator administered pre-test for the selected nurses and the investigator manipulated the independent variables

i.e. structured teaching and implementation of clinical pathway for parturient mothers in the same group of nurses and the post test was conducted. The parturient mothers were selected and assessed for existing nursing practice. After the structured teaching, the other groups of parturient mothers were assessed with clinical pathway practice without randomization in the mothers. The research design is represented diagrammatically as follows:

For nurses

O1 X O2

O1- pre-test to assess the knowledge of nurses regarding clinical pathway for parturient mothers.

X – Structured teaching on clinical pathway for parturient mothers**.**

O2 – post-test to assess the gained knowledge of nurses regarding clinical pathway for parturient mothers.

For parturient mother

- O1

X O1

X – Implementation of clinical pathway for parturient mothers.

O1 - Observation of level of satisfaction and a maternal outcome for the parturient mothers.

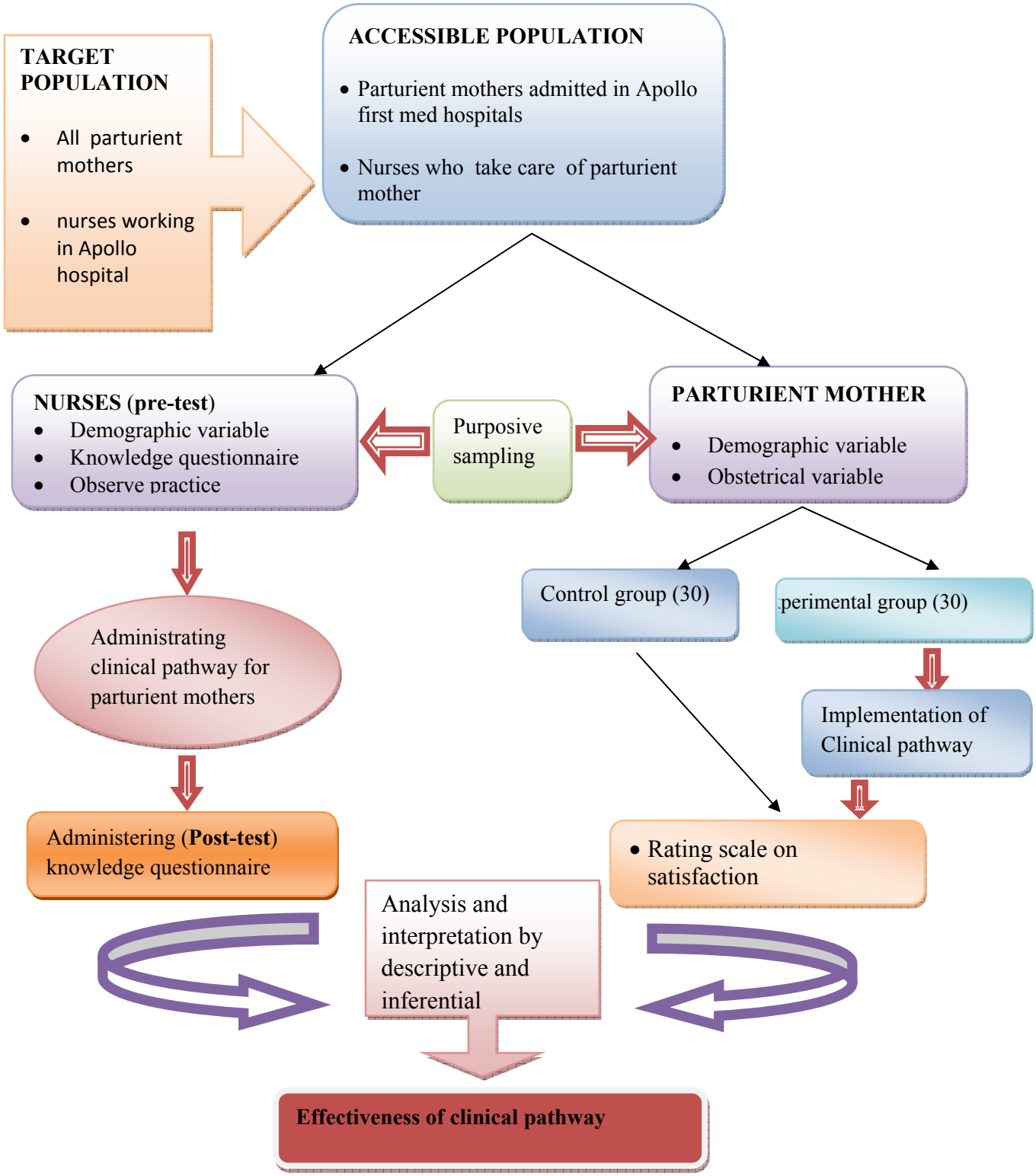

Fig. 2 schematic diagrammatic representation of study

Variables

Independent variable

The variable that is believed to cause or influence the dependent variable is the Independent variable (Polit and Beck, 2008). The independent variable for this study was the clinical pathway for parturient mothers.

Dependent variable

The variable hypothesized to depend on or be caused by another variable is the dependent variable (Polit and Beck, 2008). The dependent variable for this study was knowledge and practice of nurses and maternal outcome.

Extraneous variable

Variables that describe the study sample characteristics are termed as attribute variables (Polit and Beck, 2008). In this study, the attribute variables were demographic variable proforma for nurses, clinical variable proforma and demographic variable proforma for parturient mothers.

Research Setting

The study was conducted at Apollo First Med Hospitals in the labour wards. The hospital is 120 bedded with average census of 40- 60 normal delivery per month. There are 3 waiting rooms for the client who are in active phase of labour and the labour room consists of CTG machine, 2 labour cots, emergency drug tray; radiant warmer with emergency resuscitation kit, sterile delivery kit, instruments needed for assisted vaginal

delivery includes Forceps, Vacuum machine, Kiwi kit and all sterile articles needed for conduction of labour.

Population

Population is the entire set of individuals or objects having some common characteristics (Polit and Beck 2010). The target population is the entire population in which a researcher is interested and to which he or she would like to generalize the study results. In this study the target population was all the parturient mothers. The accessible population is the aggregate of cases that conform to designated criteria and that are accessible as subjects for a study. In this study the accessible population was all the parturient mothers admitted at Apollo First Med Hospital, Chennai.

Sample

According to Polit and Beck (2010) sample is a subset of population elements. A sample of 60 parturient mothers and 12 nurses was selected among which 30 parturient mothers was the control group and 30 parturient mothers was assigned to the experimental group and nurses was selected by one group pre and post- test.

Sampling Technique

Sampling is the process of selecting a portion of the population to represent the entire population so that inferences about the population can be made (Polit and Beck 2010). The subject of the study will be selected by purposive sampling.

Sampling Criteria

Inclusion criteria

The study include mother who will be

- in the labour process
- between 37-42 weeks of gestation
- able to understand Tamil or English
- willing to participate in the study

The study include nurses who

- will be able to understand English
- taking care of parturient mothers
- Available in the shift at the time of data collection.

Exclusion criteria

The study excludes mother who

- are not willing to participate in the study
- With gestational age ≤ 36 weeks
- prepare for cesarean delivery mother

The study excludes nurses who

- are not available at the time of data collection
- are not take care of parturient mothers

Selection and Development of Study Instruments

As the study aimed to evaluate the effectiveness of clinical pathway for mothers with caesarean section, the data collection instruments were developed through an extensive review of literature. The instruments used in this study were demographic variable proforma for nurses and mother, obstetric variable proforma, structured knowledge assessment questionnaire, clinical pathway checklist, complication assessment scale and satisfaction scale.

Demographic Variable Proforma for Nurses

Demographic variable Proforma for nurses consists of age, religion, educational Status, marital status, type of residential area, year of experience, monthly income, Previous information about the clinical pathway.

Demographic Variable Proforma for Parturient Mothers

Demographic Proforma for mothers consists of age, religion, education, occupation, age at marriage, type of family, family income.

Obstetric Variable Proforma

Obstetric variable proforma consists of gestational age in weeks, number of antenatal visits, order of pregnancy, type of delivery, Duration of first, second, third stage and fourth stage of labor, co morbidity, and complications arise during labor.

Structured Questionnaire on Knowledge regarding Clinical pathway for Parturient mothers

This structured knowledge questionnaire is used to collect information on knowledge of nurse regarding clinical pathway for parturient mothers. This was framed very carefully, considering the language, clarity, organization and sequence of items. The questions were formulated and options were given below the questions. Structured knowledge questionnaire consisted of 25 multiple choices of questions on knowledge regarding clinical pathway, 1ststage of labor, 2nd stage of labor, 3rd stage of labor and 4th stage of labor. Each question had four options which included one right answer. The subjects were to choose any option for each question. Every correct answer was assigned with scores are classified into 3 levels.

Score	Percentage	Level of knowledge
<15	<50	Inadequate
15 to 22	51 to 75	Moderate adequate
23 to 30	>76%	High satisfaction

Clinical pathway Practice check list for parturient mothers

Compliance is activity that has been completed by the nurse, partially compliance this indicates attempt to perform, but not completed, non compliance this indicates unable to complete a specific activity by nurses. It includes clinical assessment, breathing, regulatory functions, nutrition, elimination, position, comfort, personal hygiene, safety, communication, spiritual, activity, emotional support, health education and rest.

Score

1st stage	2stage	3rd stage	4stage	Percentage	Interpretation
<91	<25	<21	<31	<50	Non compliant
92-137	38-26	32-22	32-46	51-75	Partially Compliant
138-138	39-52	33-44	48-64	>75	Compliant

Rating scale on satisfaction for parturient mothers

This rating scale was designed to assess the level of satisfaction of mothers regarding nursing care for control and experimental group of parturient mothers. It includes satisfaction expressed by comfort, nursing care, nutrition, elimination needs, activity, personal hygiene, safety, spiritual need, communication, and family health education with scores ranging from low to highly satisfaction.

The satisfaction score were classified into 3 levels

Score	Percentage	Level of satisfaction
1-30	<50%	Low satisfaction
31-45	51 - 75%	Moderate satisfaction
46-60	>76%	High satisfaction

Rating scale for maternal outcome

Rating scale for maternal outcome consisted of 14 needs. It includes regulatory functions, oxygenation, nutrition, elimination, rest, comfort, personal hygiene, communication, activity, diversional needs, and health teaching with scores ranging from no complication to major complications.

Scores	Percentage	Level of outcome
0 to 13	(>75)	No complication
14 to 19.5	(51 -75)	Minor complication
19.6 to 28	(≤50)	Major complication

Psychometric Properties of the Instruments

Validity

Content validity of the tool was obtained from seven experts in the field of Obstetrics and Gynecology. Three of the experts were doctors and four were nursing personnel. The suggestions given by the validators regarding rating scale was made in the final preparation of the tool.

Reliability

Reliability is the degree of consistence or dependability with which an instrument measures an attribute (Polit 2010). The reliability of the tools was determined by using split half method and inter rater technique. Karl Pearson's 'r' was computed for finding out the reliability.

Structured knowledge questionnaire – Split half method (r = 0.87)

Practice check list for nurses – Inter rater technique (r = 0.93)

Rating scale for patient satisfaction – Split half method (r = 0.95)

Checklist for patients outcome – Split half method (r = 0.78)

Development of Clinical Pathway

The researcher developed the clinical pathway for parturient mothers by extensive review of literature, participatory observation of nursing care from admission to discharge and getting suggestion from health care team members including Obstetrician and gynecologists, nursing officers, staff nurses, physiotherapist & dietician. Henderson's 14 basic needs was the basis for the pathway. After formulating, the pathway was validated by the experts.

Henderson identified 14 basic needs of the patient, which comprise the components of nursing care. These include the following needs.

1. Breathe normally
2. Eat &drink adequately
3. Eliminate body wastes
4. Move and maintain position
5. Sleep and rest.
6. Suitable clothing
7. Maintain body temperature
8. Keep body clean &well groomed
9. Avoid dangers in environment
10. Communication
11. Worship according to one's faith
12. Work Accomplishment

13. Recreation

14. Learn discover or satisfy curiosity

The clinical pathway for parturient mothers contains eligibility criteria and activities were tabulated on 14 aspects for four stages. The aspects included were clinical assessment, breathing, regulatory functions, nutrition, elimination, position, comfort, personal hygiene, safety, communication, spiritual, activity, emotional support, health education and rest. The prescribed length of stay was four stages of labor. The clinical pathway form was attached with the patient's file and the nurse caring for the patient should act according to it and document it. If any variances are observed, it should be noted in the pathway.

Pilot study

Pilot study is a small scale version or trial run done in preparation for a major study (Polit, 2004). The purpose of the pilot study was to find out the feasibility and practicability of study design.

The pilot study was conducted at WCF Hospital, Chennai by selecting 8Parturientmothers with 4 mothers in the control group and 4 mothers in the experimental group using purposive sampling in order to assess the methodology and tool. The purpose is to find out the feasibility and practicability of the study design. After the pilot study, it was found to be feasible and effective and the study instruments were found to be appropriate.

Protection of Human Rights

The study was conducted after obtaining clearance from Ethical committee, Apollo hospitals, Chennai and permission from the Research and Medical guide. Consent was obtained from all the participants before the data collection. Confidentiality was maintained throughout the study

Data Collection Procedure

Data collection is the precise, systematic gathering of information relevant to the research purpose. The researcher presented the proposal to the ethical committee of Apollo Hospitals and got ethical clearance to proceed the study. The investigator collected the data from Apollo First Med Hospital after obtaining formal permission from concerned authorities. The observation time schedule was from 7a.m-12 noon and 12.30 p.m-5.30 p.m. The data collection period was from June 17th to July 17th 2011.

A group of 12 nurses were selected from Labor ward by purposive sampling technique and obtained verbal consent by the study participant. During the shift changing time (2-3 p.m) the nurses were gathered in the nurses' station and the investigator collected the baseline data by using demographic variable proforma. Their pretest knowledge was assessed by using structured knowledge questionnaire on clinical pathway for parturient mothers.

The control group of 30 parturient mothers was selected from the same wards by purposive sampling method. On the day of their admission baseline data was collected by using demographic and clinical variable proforma, after obtaining consent from them. Nursing care received by these patients was assessed by using practice check list through participatory observation method. Outcome of these patients was monitored by using rating scale. At the time of their discharge rating scale on level of satisfaction of nursing care was assessed.

Clinical pathway for parturient mothers was educated by same group of nurses and the doubts of nurses were cleared. The nurses were then instructed to use the clinical pathway from the time of admission of parturient mothers. After one week the investigator assessed the post test knowledge level of same group of nurses. Baseline data was collected by using demographic and clinical variable proforma. Nursing care of these patients was assessed by using practice check list upon the nurses by participatory observation method. Outcome of these mothers was monitored by using rating scale. At the time of their discharge rating scale on level of satisfaction of nursing care was assessed. The researcher was able to collect data for 30 parturient mothers in the experimental group of parturient mothers.

Problems Faced during Data Collection

- Nurses feel too many workload
- Take more time to fill the practice checklist

Plan for Data Analysis

Data analysis is the systematic organization, synthesis of research data and testing of hypothesis using those data (Polit and Beck 2010).

Analysis were carried out using Descriptive statistics like frequency distribution, percentage, mean, standard deviation and inferential statistics like paired ‘t’and unpaired test. The association between the demographic variables, obstetric variables and dependent variables were analyzed with the help of chi-square test.

Summary

This chapter dealt with the research approach, research design, setting, population, sample, sampling technique, sampling criteria, development of study instruments, reliability and validity of the instruments, pilot study, data collection procedure and plan for data analysis.

Chapter IV

Analysis and Interpretation

CHAPTER IV

ANALYSIS AND INTERPRETATION

This chapter deals with the methods of obtaining and analyzing figures or data in order to take decision. Chapter includes both descriptive and inferential statistical analysis of data. According to Croxton and Gowden (2008), statistics is the collection, preservation, analysis and interpretation of numerical data. The data was collected from the 12 nurses as pre &post test regarding structured knowledge questionnaire on clinical pathway for parturient mothers, 60 parturient mothers in which 30 in control and 30 in experimental group by using clinical pathway practice checklist for parturient mothers.

The data includes structured knowledge questionnaire for nurses, level of satisfaction rating scale, maternal outcome rating scale and the clinical pathway practice checklist for parturient mothers. Once the master coding sheet was prepared, and the data were analyzed. The researcher has used descriptive and inferential statistics for analyzing the data.

Organization of findings

The findings of the study are organized and presented under the following headings.

- Frequency and percentage distribution of demographic variables of nurses, their level of knowledge and their practice scores.
- Frequency and percentage distribution of demographic variables, obstetrical variables of postnatal mothers, their level of satisfaction and maternal outcome.

- Comparison of mean and standard deviation of level of knowledge and practice scores of nurses.
- Comparison and standard deviation of level of satisfaction and maternal outcome for parturient mothers.
- Association between the selected demographic variables with the pre &post test level of knowledge for nurses.
- Association between the selected demographic variables, obstetric variables with their level of satisfaction and the maternal outcome of control and experimental group of parturient mothers.

Table 1

Frequency and Percentage Distribution of Demographic Variables of Nurses in Pre and Post-test (Age In Years, Religion, Educational Status ,Marital Status, Type Of Residential Area, Years Of Experience ,Income Per Month ,Previous Information Acquired Regarding Clinical Pathway)

(N=30)

Demographic variables	**f**	**P**
Age (in years)		
≤21	1	8.33
22 to 24	9	75
25 to 29	1	8.33
≥30	1	8.33
Religion		
Hindu	7	58.33
Muslim	4	33.33
Christian	1	8.33
Others	0	0
Income per month in Rupees		
<5000	1	8.33
5001 to 7500	7	58.33
7501 to 10000	3	25
>10000	1	8.33
Previous information		
Yes	8	66.67
No	4	33.33
If Yes,		
Books	8	66.67
Journals	0	0
Magazines	0	0

Colleagues	0	0

The data presented in the table 1 shows that majority of the nurses were at the educational qualification of B.Sc. (Nsg), (75%) with the income of about Rs.5000-7500 (58.3%) and information about clinical pathway (66.7%), Most of the nurses were at the age group of above 22-24years (75%), with working experiences <1years (50%).

Fig 3 shows that majority of them were single (91.67%) and significant nurses were married (8.33%).

Fig 4 reveals that most of the nurses belongs to hostel (66.67%) and significant nurses were stay in home (33.33%).

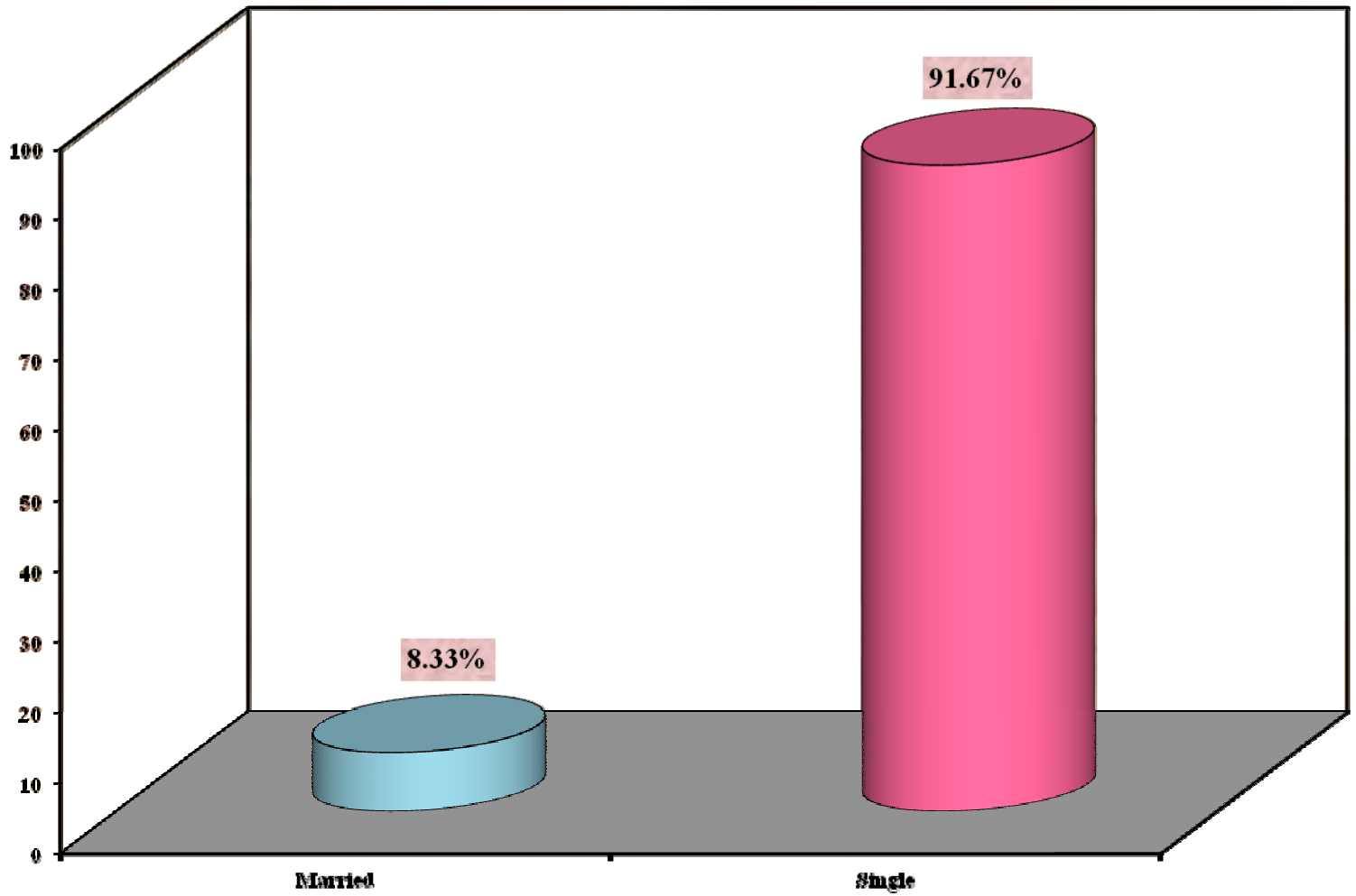

Fig.3 Percentage distribution of marital status of nurses

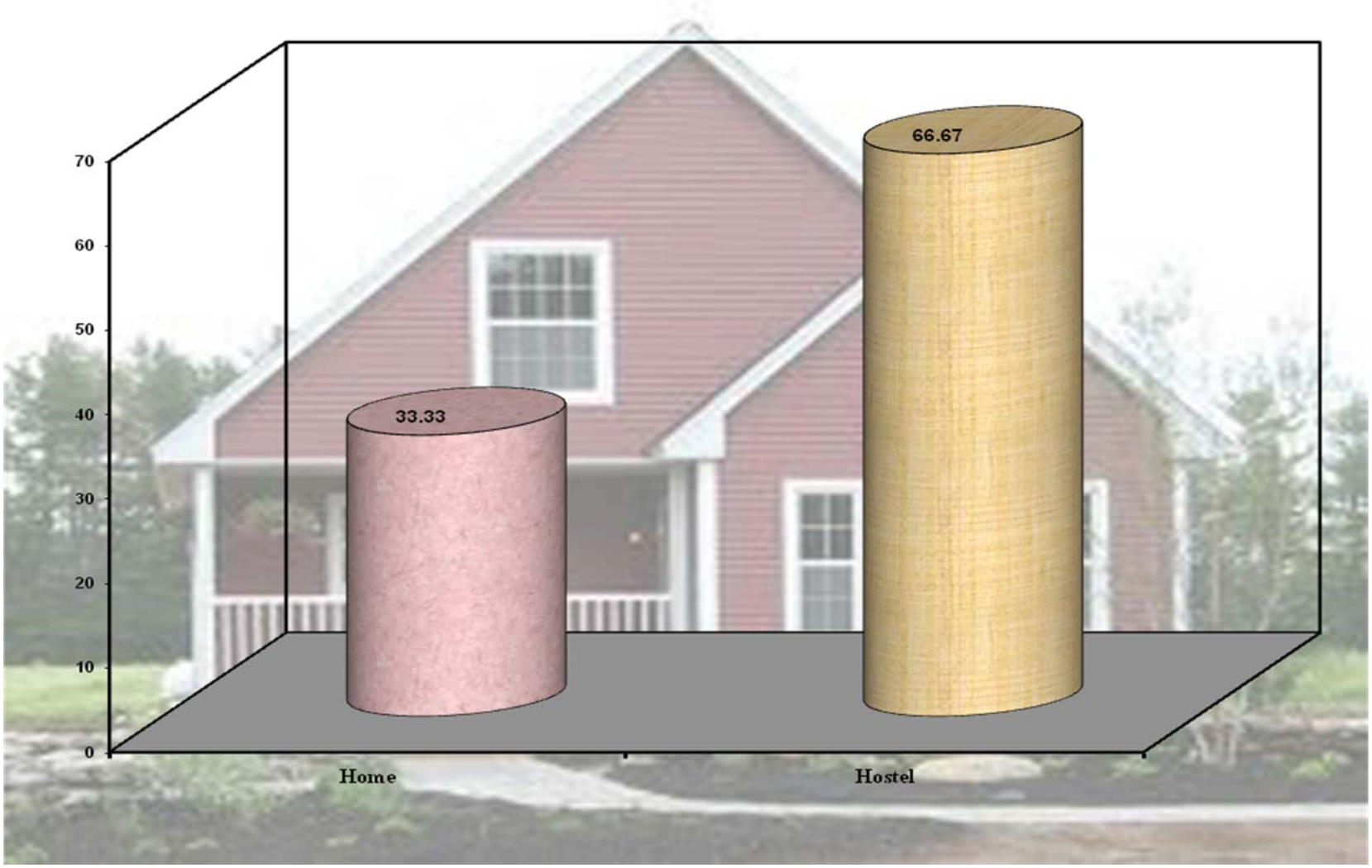

Fig.3 Percentage distribution of type of residence of nurses

Table 2

Frequency and Percentage Distribution of Demographic Variables of Parturient Mothers of Control and Experimental Group of parturient mother (Age in Years, Religion, Occupation, Age at Marriage, Type of the Family, Family Income)

Demographic variables	control group (n=30)		Experimental group (n=30)	
	n	p	n	P
Age in years				
≤20	6	20	3	10
21 to 23	9	30	13	43.3
24 to 30	15	50	14	46.7
>30				
Occupation				
Working	7	23.3	11	36.7
Not working	23	76.67	19	63.3
Age at marriage at yrs				
<19	-	-	-	-
20 to 23	25	83.3	22	46.7
24 to 27	5	23.3	13	43.3
27 to 30	-	-	-	-
Type of family				
Nuclear	10	33.3	15	50
Joint	20	66.7	15	50
Family income(in rupees)				
10,000 - 20,000	3	10	-	-
20,001 - 40,000	22	73.3	22	73.3
40,001 - 60,000	5	16.67	8	26.67
>60,000	-	-	-	-

Table 2 depict that Most of the mothers in the control group belongs to the age group between 24-30 years(70%), had graduate(83.3%), with monthly income about Rs.20001-40,000 (73.3%), Majority of the mother married at the age 20- 23 years(73.3%), were majority of them home makers (76.7%) living as a joint family (50%).

The majority of the mothers in the experimental group were between 24-30 years(70%), most of the mothers Hindu (83.3%), married at the age of 20- 23years (73.3%), half of them living as a nuclear family (50%) , with the income of about Rs.20000- 40,000 (73.3%), Majority of them not working (73.3%).

Fig 5 interprets that most of the mothers in the both the control and experimental group belongs to graduate (53.3%, 83.3%).

Fig 6 shows that majority of the mother in the both the control and experimental group belongs to Hindu (70%, 83.3%)

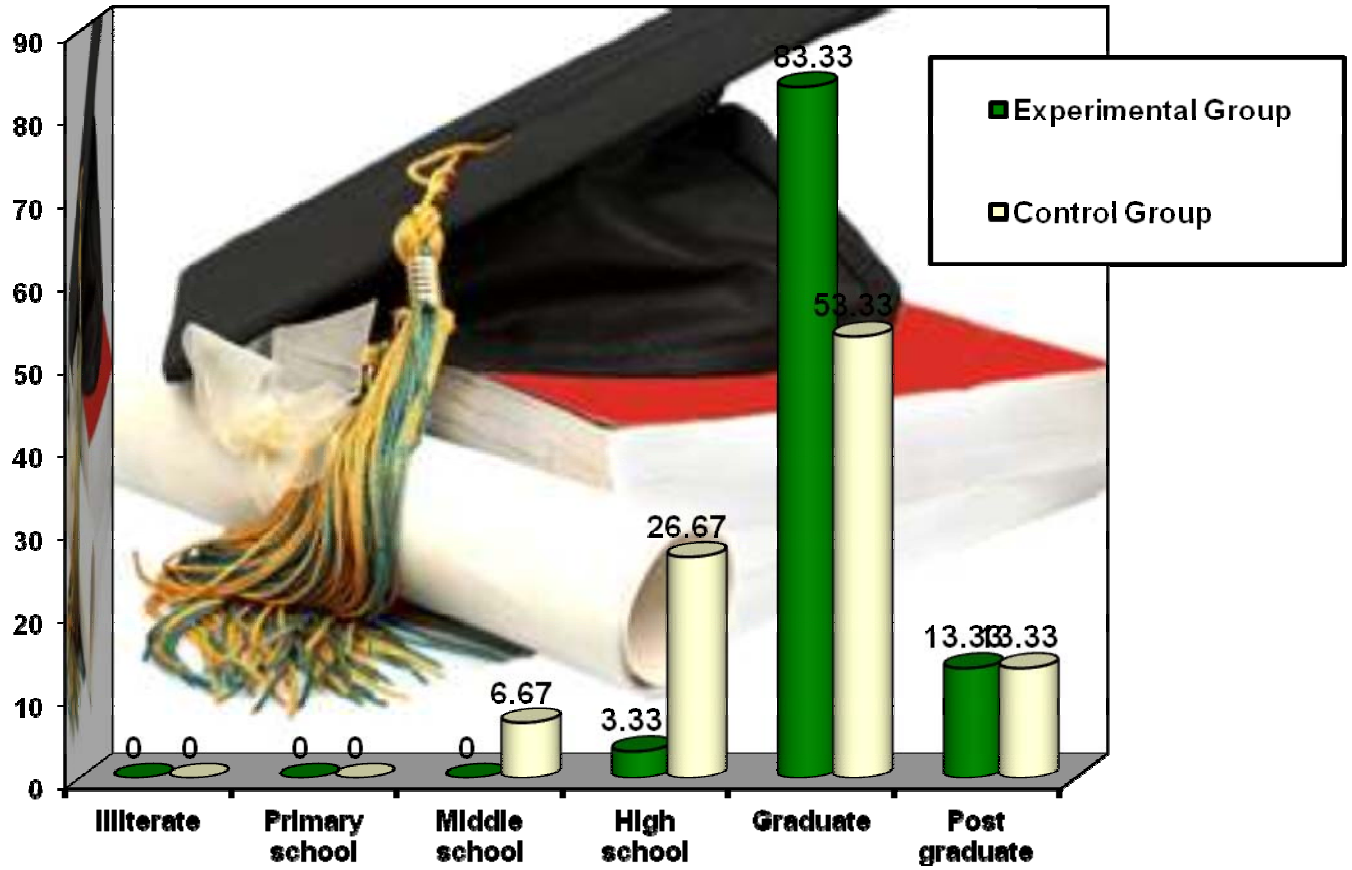

Fig. 7 Percentage distribution of education status of parturient mothers

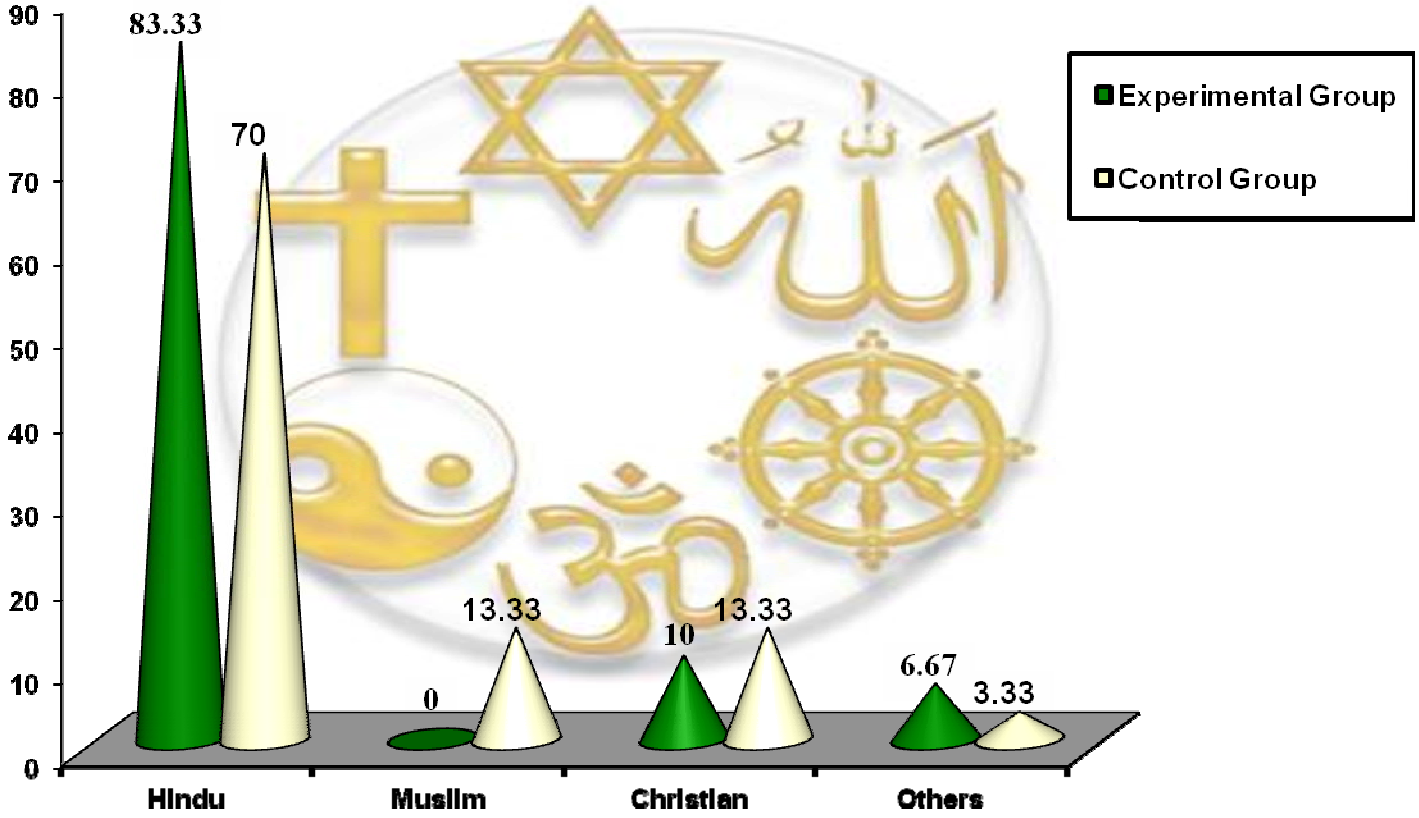

Fig.8 Percentage distribution of religion of parturient mothers

Table 3

Frequency and Percentage Distribution of Obstetrical Variables of Control and Experimental Group of Parturient Mothers (Gestational Age, Number Of Visit, Order of Pregnancy, Type of Delivery, Duration of First, Second, Third, Fourth Stage, Co-Morbidity).

Obstetric Variables	Control Group (N=30)		Experimental Group (N=30)	
	f	p	f	p
Gestational age in weeks				
37 - 38	9	30	11	36.67
39 - 40	18	60	17	56.67
41 - 42	3	10	2	6.67
Number of antenatal visits				
No visit	0	0	0	0
≤4	0	0	0	0
>5	30	100	30	100
Order of pregnancy				
Primi gravida	18	60	30	100
Second gravida	9	30	0	0
Third gravida	3	10	0	0
Multi gravida	0	0	0	0
Type of delivery				
Normal vaginal delivery	16	53.33	17	56.67
Vacuum delivery	14	46.67	12	40
Forceps delivery	0	0	1	3.33
Duration of 1st stage of labour				
<10 hours	14	46.67	15	50
10 - 14 hours	14	46.67	15	50
>14 hours	2	6.67	0	0
Duration of 2nd stage of labour				
<1 hour	14	46.67	16	53.33
1 hour - 2 hours	16	53.33	14	46.67
>2 hours	0	0	0	0
Duration of 3rd stage of labour				
<10 minutes	29	96.67	20	66.67
10 - 20 minutes	1	3.33	10	33.33
>20 minutes	0	0	0	0
Duration of 4th stage of labour				
1 hour	30	100	29	96.67

2 hours	0	0	1	3.33
3 hours	0	0	0	0
Co-morbidity				
H/O illness before pregnancy	2	6.67	1	3.33
H/O illness during pregnancy	4	13.33	0	0
No H/O illness	24	80	29	96.67
Complication arising during labour				
Yes	2	6.67	2	6.67
No	28	93.33	28	93.33

The data presented in Table 3 depicts that Majority of the mothers in both the control and experimental group were between the gestational age of 39–40weeks (60%, 56.7%) and order of pregnancy were primi gravid (60%, 100%) respectively. All the mothers in both the group had more than five antenatal visits (100%, 100%) and majority of them mothers undergone normal vaginal delivery (53.3%, 56.7%) with the 1st stage of labor less than 10 hours (46.67%, 50%) and 2nd stage of labor less than 1 hour (46.67%,53.33%). Majority of the mothers in the control and experimental group had no complication (80%, 86.7%) with no co-morbidity (93.3%, 93.3%) respectively.

Table 4

Frequency and Percentage Distribution of Pre and Post-test Level of Knowledge of Nurses on Clinical Pathway for Parturient Mothers.

(N=12)

Level of knowledge	**Inadequate**		**Moderately adequate**		**Adequate**	
	F	**P**	**f**	**P**	**F**	**p**
Pre-test	2	16.7	9	75	1	8.3
Post-test	-	-	-	-	12	100

Table 4 depicts that all of the nurses (100%) had adequate knowledge after the post-test. In the pre-test most of the nurses (75%) had moderately adequate knowledge.

Table 5

Frequency and Percentage Distribution of Practice of Nurses in Control and Experimental Group of Parturient Mothers.

	Control group (n=30)		Experimental group (n=30)	
Practice	**f**	**P**	**F**	**P**
Inadequate practice	-	-	-	-
Moderate practice	30	100	-	-
Adequate practice	-	-	30	100

The data given in both the experimental and control group of parturient mothers were having compliance of activities are adequate and moderate practice (100%), but there is significance difference between these groups. It has been later discussed with significance table.

Table 6

Frequency and Percentage Distribution of Level of Satisfaction in Control and Experimental Group of Parturient Mothers

Level of satisfaction	Control group (n=30)		Experimental group (n=30)	
	n	P	N	P
Low	-	-	-	-
Moderate	11	36.7	-	-
Highly	19	63.3	30	100

The data given in the table 6 depicts that majority of the parturient mothers in the control group (63.3%) had highly satisfied in the nursing care.

In the experimental group, majority of the mothers (100%) had highly satisfied in the nursing care.

Table 7

Frequency and Percentage Distributions of Maternal Outcome in Control and Experimental Groups of Parturient Mothers.

Maternal outcome	Control group (n=30)		Experimental group (n=30)	
	f	P	F	P
No complications	30	100	30	100
Minor complications	-	-	-	-
Major complications	-	-	-	-

It was observed that the majority of the mothers were not developed no complications (100%) in the control group and experimental group of parturient mothers.

Table 8

Comparison of Mean and Standard Deviation of Pre and Post-Test Level of Knowledge of Nurses on Clinical Pathway for Parturient Mothers.

(N=12)

Knowledge scores	Mean	SD	't' Value
Pre-test	14.92	2.61	7.595***
Post-test	21.67	1.49	
Improvement	6.7	0.59	

***P< 0.001

It can be incurred from table 8 that mean and standard deviation of level of knowledge of nurses were low in the pre-test (M= 14.9, SD=2.61) in comparison to the post-test (M=21.67, SD-1.49), with the obtained 't' value of 7.595 ($p<0.001$). The difference was statistically proved at 99.9% level of confidence and it shows that effectiveness of clinical pathway upon the nurses. Hence the null hypotheses Ho_1 were rejected.

Table 9

Comparison of Mean and Standard Deviation of Pre and Post-test Level of Knowledge among Nurses in Relation to Various Aspects of Clinical Pathway for Mothers.

Knowledge	Pre test(n=12)		Post test(n=12)		
	Mean	SD	Mean	SD	't' Value
Clinical pathway	2.4	0.49	3.8	1.6	13***
1st stage of labor	3.4	0.86	4.3	0.75	9.1***
2nd stage of labor	3.3	1.5	4.4	0.53	7.79***
3rd stage of labor	2.25	0.5	3.8	0.68	5.8***
4th stage of labor	3.75	0.72	4.8	0.2	28.56***

***p<0.001

Table 9 depicts that the highest improvement in the mean and standard deviation of Knowledge on clinical pathway was low in pre test in all aspects of care and high in the post test. This shows that the knowledge of the nurses improved (M=2.4, SD=0.49; M=3.8, SD=1.6) clinical pathway, (M=3.4, SD=0.86; M=4.3, SD=0.75) 1st stage of labor; (M=3.3, SD=1.5; M=4.4, SD=0.53), 2nd stage of labor (M=2.25, SD=0.5; M=3.8, SD=0.68), 3rd stage of labor (M=3.75, SD=0.72; M=4.8, SD=0.2), 4th stage of labor respectively. The difference was statistically proved at 99.9% level of confidence and it was attributed to the effectiveness of clinical pathway upon the nurses in various aspects of care.

Table 10

Comparison of Mean and Standard Deviation of Practice of Nurses in Control and Experimental Group of Parturient Mothers

(N=60)

Practice scores	**Mean**	**SD**	**'t' Value**
Control group	235.5	4.9	31***
Experimental group	298	9.85	

***P< 0.001

It can be incurred from table 10 that mean and standard deviation of practice scores of nurses were high in experimental group of parturient mothers (M=298, SD=9.85) in comparison to the control group of parturient mothers (M=235, SD=4.9).The difference was statistically proved at 99.9% level of confidence and it shows the effectiveness of clinical pathway upon the nurses on patients with hysterectomy. Hence the null hypotheses Ho_1 were rejected.

Table 11

Comparison of Mean and Standard Deviation of Pre and Post Test Practice of Nurses in Control and Experimental Group of Parturient Mothers.

Practice	Control group (n=30)		Experimental group (n=30)		't' Value
	Mean	SD	Mean	SD	
1st stage	141.3	4.94	165.33	6.39	16.33***
2nd stage	29.45	1.3	43.3	1.47	38.5***
3rd stage	26.62	0.94	39.43	0.82	64***
4th stage	38.62	0.94	52.93	3.02	23.8***

The result from above table 11 mean and standard deviation of practice of nurses in control group were less compared to the experimental group of parturient mothers. This shows the practice of the nurses in 1st stage of control and experimental group(M=141, SD=4.94; M=165.33, SD=1.47),2nd stage (M=29.45, SD=1.3; M=43.3, SD=1.47), 3rd stage (M=26.62, SD=0.94; M=39.43, SD=0.82),4th stage (M=38.62, SD=0.94; M=52.93, SD=3.02) respectively . The difference was statistically proved at 99% level of confidence and it was concluded that the practice of nurses in clinical pathway for parturient mothers was compliant in experimental group.

Table 12

Comparison of Mean and Standard Deviation of Practice of Nurses in Various Dimensions in Control and Experimental Group of Parturient Mothers.

Practice	control group (n=30)		Experimental group (n=30)		
	Mean	SD	Mean	SD	't' Value
Clinical Assessment	26.13	4.75	29.07	0.25	3.34***
Breathing	17.47	2.92	19	0	2.9***
Regulatory function	25.37	4.6	30	4.81	3.8***
Nutrition	13.67	1.83	14	0	1***
Elimination	11.77	1.28	20.2	0.55	42***
Position	9.87	0	12	0	0
Comfort	18.7	2.48	26	0	16.2***
Personal Hygiene	10.9	0.55	16.37	1.75	16.58***
Safety	14.5	2.47	18.5	0.86	8.69***
Communucation	21.6	2.19	24	0	6***
Spiritual	1.33	1.83	5	0	11.12***
Activity	11.03	0.18	14	0	99***
Emotinal support	17.23	2.06	31.57	1.41	31***
Health education	14	0	28.5	0.86	90.6***
Rest	17.9	0.55	17.93	0.25	0.3

The result from above table 12 mean and standard deviation of practice of nurses in various dimensions in control group were less compared to the experimental group of parturient mothers

Table 13

Comparison of mean and standard deviation of level of satisfaction in control and experimental group of parturient mothers.

(N=60)

Level of satisfaction	Mean	SD	't' Value
Control group	78.9	10.73	9.19***
Experimental group	100.5	7.15	

***P< 0.001

Table 13 that mean and standard deviation of level of satisfaction of parturient mothers in the experimental group (M= 78.9, SD=10.73) is high when compared to the control group (M=88.23, SD= 5.33) which indicates that the experimental group of parturient mothers are highly satisfied. The level of confidence was 99.9% and it shows that effectiveness of clinical pathway upon the parturient mothers satisfaction. Hence the null hypotheses Ho_2 were rejected**.**

Table 14

Comparison of Mean and Standard Deviation of Level of satisfaction among Parturient Mothers in Relation to Various Aspects of Clinical Pathway for Parturient Mothers.

Level of satisfaction	Control group (n=30)		Experimental group (n=30)		't' Value
	Mean	SD	Mean	SD	
Comfort, Nursing care	3.6	0.18	6	0	80***
Nutrition, elimination, activity	5.3	o.17	7.5	0.09	44***
Personal hygiene, safety, spiritual activity	3.9	0.21	7.4	0.12	116.7***
Communication, family involvement, health education.	6.6	0.12	7.2	0.13	20***

The result from above table 14 represents that mean and standard deviation of control group was less compared to the experimental group of parturient mothers. The difference was statistically proved at 99.9% level of confidence and can be attributed to the effectiveness of clinical pathway upon parturient mothers satisfaction.

Table 15

Comparison of mean and standard deviation of maternal outcome in control and experimental group of parturient mothers.

(N=60)

Maternal outcome	Mean	SD	't' Value
Control group	9.7	5.2	6.14**
Experimental group	2.7	3.5	

**P< 0.01

The mean and standard deviation was depicted in the table 12 about the maternal outcome of parturient mothers in the experimental group (M= 9.7, SD=5.2) is low when compared to the control group (M=2.7, SD= 3.5) which indicates the experimental group of mothers are not developed complications. The level of significance was 97.9% and it shows that effectiveness of clinical pathway upon the maternal outcome of the parturient mothers. Hence the null hypotheses Ho_2 were rejected**.**

Table 16

Association between Selected Demographic Variables and the Level of Knowledge of Nurses in Pre and Post Test Regarding Clinical Pathway of Parturient Mothers

Demographic variables	Pre-test (n=12)			Post-test (n=12)		
	Inadequate	Moderate	$\chi 2$	Moderate	adequate	$\chi 2$
Age in years						
<=21	1	0	2.857	-	1	
22 to 24	4	5	d.f = 3		9	
25 to 29	0	1			1	
>=30	0	1			1	
Religion						
Hindu	3	4	1.861	-	7	
Muslim	1	3	d.f = 2		4	
Christian	1	0			1	
Educational Status						
Diploma in Nursing	1	2	0.114	-	3	
B.Sc.(N)	4	5	df=1		9	
Years of experience						
0 - 1 yr	4	2	3.771	-	6	
2 - 4 yrs	1	2	d.f = 2		3	
5 - 7 yrs	0	3			3	
Marital Status						
Married	0	1	0.779	-	1	
Single	5	6	df=1		11	
Type of the residential area			0.686	-		
Home	1	3	d.f = 1		4	
Hostel	4	4			8	
Income per month in Rupees						
<5000	1	0	4.947	-	1	
5001 to 7500	4	3	d.f = 3		7	
7501 to 10000	0	3			3	
>10000	0	1			1	
Previous information			0.171			
Yes	3	5	d.f = 1	-	8	
No	2	2			4	

The table 16 shows there is no association between the age, Religion, educational qualification and years of experience in the level of knowledge for the nurses in the pre-test and post-test. It has proven that there is no association between the selected demographic variables and level of knowledge. Hence the null hypothesis Ho_3 was retained

Table 17

Association of Selected Demographic Variables and the Level of Satisfaction in Control and Experimental Group of Parturient Mothers.

Demographic variables	Control group(n=30)			Experimental group(n=30)		
Level of Satisfaction	Moderate	Highly	$\chi 2$	Moderate	Highly	$\chi 2$
Age (in years)						
21-23	2	1			2	
24-30	9	13	1.132	-	21	
>30	3	2	(df=2)		7	
Religion						
Hindu	9	12			25	
Muslim	2	2	2.305	-	-	
Christian	3	1	(df=3)		3	
Others	-	1			2	
Educational						
Middle school	5	5		-	1	
Graduate	7	9	2.628		25	
Post graduate	2	2	(df=2)		4	
Occupation						
Working	3	4	0.053	-	7	
Not working	11	12	(df=1)		23	
Age at marriage at yrs						
20-23	12	13	0.107	-	22	
24-27	2	3	(df=1)		8	
Type of family						
Nucler	5	5	0.067	-	15	
Joint	9	11	(df=1)		15	
Income per month in rupees						
10,000-20,000	3	-	4.724		2	
20,000-40,000	-	2	(df=2)	-	20	
40,001-60,000	-	25	-		8	

The data presented in table 17 it can be revealed that there is no association between level of satisfaction in the control group and experimental group of parturient mothers. Hence null hypothesis Ho_4 was retained.

Table 18

Association of Selected Obstetrical Variables and the Level of Satisfaction in Control and Experimental Group of Parturient Mothers

Obstetric Variables	Control Group (n=30)		χ^2	Experimental Group (n=30)		χ^2
	Moderate	Highly		Moderate	Highly	
Gestational age in weeks						
37 – 38	4	5	0.312	-	11	
39 – 40	9	9	d.f = 2		17	
41 – 42	1	2			2	
Number of antenatal visits				-		
>5	14	16	-		30	
Order of pregnancy						
Primigravida	9	9	2.991	-	30	
Second gravida	5	4	d.f = 2		-	
Third gravida	0	3			-	
Type of delivery						
Normal vaginal delivery	5	11	3.274	-	17	
Vacuum delivery	9	5	d.f = 1		12	
Forceps delivery					1	
Duration of 1st stage of labour						
			3.023			
<10 hours	7	7	d.f = 1	-	15	
10 - 14 hours	5	9			15	
>14 hours	2	0			-	
Duration of 2nd stage of labour						
			0.153			
<1 hour	6	8	d.f = 1	-	16	
1 hour - 2 hours	8	8			14	
Duration of 3rd stage of labour			0.905			
			d.f = 1			
<10 minutes	14	15		-	20	
10 - 20 minutes	0	1			10	
Duration of 4th stage of labour						
			-			
1 hour	14	16		-	24	
2 hours	-	-			1	
Co-morbidity						
H/O illness before pregnancy	2	0	2.545	-	1	
H/O illness during pregnancy	2	2	d.f = 2		-	
No H/O illness	10	14			24	

Complication arising during labour Yes No	1 13	1 15	0.010 d.f = 1	-	2 28	

It can be inferred from the table 18 that there is no association between obstetric variables in the control and experimental group of parturient mothers and their level of satisfaction. Hence null hypotheses Ho_5 were retained.

Table 19

Association between Selected Demographic Variables and Maternal Outcome in Control and Experimental Group of Parturient Mothers.

Demographic variables / Maternal outcome	Control group(n=30) ≤Mean	>Mean	χ^2	Experimental group(n=30) ≤Mean	>Mean	χ^2
Age(in years)						
21 to 23	1	2	0.911 d.f = 3	2	0	6.729 d.f = 2
24 to 30	11	11		6	15	
>30 yrs	1	4		5	2	
Religion						
Hindu	9	12	2.002 d.f = 3	10	15	5.566 d.f = 2
Muslim	2	2		-	-	
Christian	2	2		3	0	
Others (Specify)	0	1		0	2	
Education						
Middle school	0	2	0.001 d.f = 1	-	-	4.588 d.f = 2
High school	3	5		1	0	
Graduate	8	8		12	13	
Post graduate	2	2		0	4	
Occupation						3.137 d.f = 1
Working	3	4	0.679 d.f = 1	1	6	
Not working	10	13		12	11	
Age at marriage at yrs						
20 to 23	10	15	0.679 d.f = 1	10	12	0.151 d.f = 1
24 to 27	3	2		3	5	
Type of family			0.068 d.f = 1			0.136 d.f =1
Nuclear	4	6		7	8	
Joint	9	11		6	9	
Family income						
10,000 - 20,000	0	3	2.900 d.f = 2	-	-	0.151 d.f = 1
20,001 - 40,000	10	12		10	12	
40,001 - 60,000	3	2		3	5	

Table 19 reveals that there is no association between age, religion, education, occupation and age at marriage with the maternal outcome in the control and experimental group of parturient mothers. Hence null hypothesis Ho_4 were retained

Table 20

Association of Selected Obstetrical Variables and Maternal Outcome in Control Group of Parturient Mothers.

Demographic variables / Maternal outcome	Control group(n=30) ≤Mean	>Mean	χ^2	Experimental group(n=30) ≤Mean	>Mean	χ^2
Gestational age in weeks						
37 – 38	5	4	6.244 d.f = 2	5	6	1.646 d.f = 2
39 – 40	5	13		8	9	
41 – 42	3	0		0	2	
Number of antenatal visits						
>5	13	17	-	13	17	-
Order of pregnancy						
Primigravida	8	10	1.041 d.f = 2	13	17	-
Second gravida	3	6		-	-	
Third gravida	2	1		-	-	
Type of delivery						
Normal vaginal delivery	6	10	0.475 d.f = 1	9	8	1.892 d.f = 2
Vacuum delivery	7	7		4	8	
Forceps delivery	-	-		0	1	
Duration of 1st stage of labour						
<10 hours	6	8	1.784 d.f = 2	12	3	6.425 d.f = 1
10 - 14 hours	7	7		1	14	
>14 hours	0	2		-	-	
Duration of 2nd stage of labour			0.621 d.f = 1			3.074 d.f = 1
<1 hour	5	9		13	3	
1 hour - 2 hours	8	8		0	14	
Duration of 3rd stage of labour			0.791 d.f = 1			0.068 d.f = 1
<10 minutes	13	16		9	11	
10 - 20 minutes	0	1		4	6	
Duration of 4th stage of labour						0.791 d.f = 1
1 hour	13	17	-	13	16	
2 hours	-	-		0	1	

Co-morbidity						
H/O illness before pregnancy	1	1	2.002 d.f = 2	0	1	0.791 d.f = 1
H/O illness during pregnancy	3	1		-	-	
No H/O illness	9	15		13	16	
Complication arising during labour			2.802 d.f = 1			1.639 d.f = 1
Yes	2	0		0	2	
No	11	17		13	15	

It can be inferred from the table 20 that there is no association between in the control and experimental group of parturient mothers and their maternal outcome. Hence null hypotheses Ho_4 were retained.

Summary

This chapter dealt with the analysis and the interpretation of the data collected by the researcher. From the analysis it can be inferred that the level of knowledge and the practice score of nurses was knowledge was high in the post test of nurses. There is no association between the selected demographic variables and obstetrical variables of parturient mothers with their level of satisfaction and outcome.

Chapter V

Discussion

CHAPTER V

DISCUSSION

STATEMENT OF THE PROBLEM

A Quasi Experimental Study to Assess the Effectiveness of Clinical pathway for Parturient Mothers upon the Knowledge and Practice of Nurses and Maternal outcome at Apollo First Med Hospital, Chennai.

OBJECTIVES OF THE STUDY

1. To assess the pre and post-test level of knowledge and practice of nurses regarding clinical pathway for parturient mothers.
2. To evaluate the effectiveness of clinical pathway for parturient mothers upon the knowledge and practice of nurses.
3. To assess and compare the maternal outcome in control and experimental group regarding clinical pathway for parturient mothers with.
4. To determine the level of satisfaction upon clinical pathway in the control and experimental groups of parturient mothers.
5. To determine the association between the selected demographic variables of nurses with their pre and post-test level of knowledge regarding clinical pathway for parturient mothers.
6. To determine the association between the selected demographic variables with maternal outcome and level of satisfaction in control and experimental groups of parturient mothers.

7. To determine the association between the selected obstetric variables with maternal outcome and level of satisfaction in control and experimental groups of parturient mothers.

The researcher conducted the study among the nurses upon their level of knowledge and the practice before and after administration of clinical pathway, among the parturient mothers with their level of satisfaction and the maternal outcome in the control and experimental group of parturient mothers.

The discussion is presented under the following heading**:**

- Demographic variables of nurses in pre & post-test with the level of knowledge.
- Demographic variables and Obstetric variables of control and experimental group of parturient mothers.
- Comparison of the level of knowledge of nurses in the pre and post-test and effectiveness of clinical pathway for parturient mothers.
- Comparison of pre and post- test knowledge scores of the nurses regarding various aspects of clinical pathway for parturient mothers.
- Association between selected demographic variables and level of satisfaction and maternal outcome.
- Association between selected obstetric variables and level of satisfaction and maternal outcome.

Demographic variables of nurses

Most of the nurses age around 21-24 years (75%) which they are standing in less experience in terms of patient care. As per this data, proves that the age of nurses was not considered instead it depends on the patient's age group how they perceive the care which rendered to them. A similar portion of nurses were married (25%). The nurses reported a higher rate of having never been married (75%). A larger portion of nurses (66.7%) had no dependents living in the home. Probably most of the nurses belongs to Hindu (66.7%) and significant groups belongs to Christian (33.3%).

In this study, most of the nurses (75%) were qualified as B.Sc (N) and significantly lesser of them (25%) had Diploma in nursing. The results of this study indicated that there was a marked increase in information or knowledge about the clinical pathway among the B.Sc (N) qualified nurses. It may indicate that education level improve the better providing nursing care.

Demographic variables of the parturient mothers

Majority of the mothers in the control and experimental group were between 24-30 years, (70%, 73.3%) is an important factor in identifying the risk cases, because complication of pregnancy and childbirth are still the leading cause of death and disabilities among women of reproductive age in developing countries. It could be interpreted that the public had adequate awareness about the ideal age for child birth among women. This view was highlighted by Nancy E et al. (1997) in their study, which revealed that teenage pregnancy had poorer birth outcomes, and mother in 30s were significantly more likely to deliver a low-birth-weight baby than women aged 25-29 years.

Half of the mothers (53.3%) were educated up to college level and higher in control group and many of the experimental group mothers were educated up to graduate level (83.3%), which can be recognized as a facilitating factor to understand the satisfaction and maternal outcome. Education of an individual plays an important role specially making health care decisions. Now a days the literacy rate of the women is more when compared to the men and they are also independent in taking decisions so as to manage the health of themselves and the family. According to census held in 2011 by national literacy mission, the percentage of female literacy has increased from 8.86% in 1956 to 65.46%in 2011.

Majority of the parturient mothers in both the group were housewives (76.6%), where the mother can take adequate rest during her pregnancy and can free from psychological stress, which is an important factor in promoting maternal and fetal wellbeing. Most of the mothers were in joint families. Joint families are like microorganism of entire world. They are the first training grounds where people learn interpersonal skills. People in joint families learn lessons of patient tolerance, cooperation and adjustment and collective responsibility. It's also help to pregnant mothers gain parenting process from support the grandparents and other relatives.

Most of the mothers in both the groups having monthly income around Rs20001-40,000 (73.3%). It denotes good economic status help to improve her health condition of the mother. When the income of the mothers increase they can able to afford high quality care and get highly satisfied with the care from the health care agencies

Clinical variables of parturient mother

The findings revealed that parturient mothers (30%, 36.7%) were in the gestational age 36-37 weeks and (60%, 56.7%), in the gestational age 38-39 weeks. This can be interpreted that labor process in appropriate gestational age will promote positive labor outcome without any fetomaternal complications.

In the present study most of the mothers in both control and experimental group are primigravida (60%, 56.7%) and the primipara may require more attention and education by the health care personnel to prevent various complications, as they experience the child bearing process for the first time. Now a day's most of the mothers educated well and she also follows one child norm. Because of our economy is one of the reasons for this one child norm.

It was remarkable to find that all the mothers 100% have attended more than 4 antenatal visits which can be interpreted that mothers as well as the family members are well known and much aware about the importance of regular antenatal checkup, for the maternal and fetal wellbeing. The above statement was consistent with the Levin's thought (1995) risk of preterm labour and maternal complications was reduced with regular antenatal visits, proper delivering the baby at the right time without leading to post term labour.

Comparison of the level of knowledge of nurses in the pre and post-test

While assessing the existing level of knowledge through pre-test, it was noted that 75% of the nurses have moderately adequate knowledge on clinical pathway for parturient

mothers, whereas in the post-test majority of the nurses (100%) gained adequate knowledge. The finding can be attributed to the effectiveness of a clinical pathway that was provided after pre-test. Therefore a regular practice regarding clinical pathway for parturient mothers should be carried out by the nurses for all parturient mothers. This indicates that the teaching clinical pathway was effective in raising the knowledge regarding parturient mothers.

Effectiveness of clinical pathway

The overall knowledge score obtained by the nurses was significantly higher in post-test (M=21.6, SD=1.91) than the pre-test (M=14.9, SD=2.5) with the obtained‘t’ value of 7.595($p<0.001$), this clearly indicates the effectiveness of clinical pathway. Hence the nursing personnel at labor ward need to plan clinical pathway to impart satisfaction and maternal outcome to the parturient mother and their families regarding practice of clinical pathway for parturient mother.

The mean and standard deviation of practice scores of nurses were high in the experimental group of clinical pathway administered (M= 298, SD=9.85) in comparison to the control group clinical pathway administration (M=235.5, SD=4.9).this clearly indicate the effectiveness of clinical pathway to impart nursing practice to the parturient mothers.

Comparison of pre and post- test knowledge scores of the nurses regarding various aspects of clinical pathway for parturient mothers

In the present study the investigator also compared the knowledge scores on various aspects of clinical pathway for parturient mothers in pre and post-test. The highest

improvement in the mean and standard deviation of Knowledge on clinical pathway was low in pre test in all aspects of care and high in the post test. This shows that the knowledge of the nurses improved (M=2.4, SD=0.49; M=3.8, SD=1.6) clinical pathway, (M=3.4, SD=0.86; M=4.3, SD=0.75) 1st stage of labor; (M=3.3, SD=1.5; M=4.4, SD=0.53), 2nd stage of labor (M=2.25, SD=0.5; M=3.8, SD=0.68), 3rd stage of labor (M=3.75, SD=0.72; M=4.8, SD=0.2), 4th stage of labor respectively.

Association between selected demographic variables and level of satisfaction

It was found by this study that there was no association between age, religion, educational qualification, and type of family with the level of satisfaction in the control group of parturient mothers. It was supported by Carolin (2010) conducting a correlation studies, this revealed that there is no correlation between perceived image of nurse and patient satisfaction.

That majority of the parturient mothers in the control group (66.7%) had highly satisfied in the nursing care. In the experimental group, majority of the mothers (100%) had highly satisfied in the nursing care.

Level of satisfaction and maternal outcome of parturient mothers

That majority of the parturient mothers in the control group (66.7%) had highly satisfied in the nursing care. In the experimental group, all of the mothers (100%) had highly satisfied in the nursing care. This findings indicates that clinical pathway was very effective in rendering care and improving the satisfaction of the mother and hence clinical pathway can be implemented rather than conventional nursing care.

Most of the mothers (100%) in control and experimental group develop no complications and have positive maternal outcome. This denotes that maternal outcomes are positive and mother's complications are decreased because of practicing clinical pathway for parturient mothers.

Association between selected demographic variables and the level of knowledge in the pre and post- test

It was found by this study that there was no significant relationship with demographic variables age, educational status, and type of residential area and years of experience with the level of knowledge. This shows that knowledge and selected demographic variables are not influencing each other. Hence knowledge level to be enhanced by the midwives by practicing clinical pathway or protocol for parturient mothers.

This view supported by Lobo (2010) conducting study for nurses regarding knowledge. Hence there was significant association between year of experience and knowledge. In researcher conducting clinical pathway, here there is no previous practice regarding clinical pathway for nurses.

Association between selected demographic variables and the level of satisfaction, maternal outcome of parturient mothers

In the control group and experimental group there was no significant association between demographic variable and level of satisfaction. This denotes that level of

satisfaction was not influenced by demographic variables and hence the level of satisfaction needs to be enhanced by the nurses by practicing clinical pathway for effective care.

It was found by this study that there was no significant relationship with demographic variables and maternal outcome. This shows that maternal outcome and selected demographic variables are not influencing each other. Hence positive maternal outcome to be enhanced by the midwives by practicing clinical pathway for parturient mothers.

Association between selected obstetric variables and the level of satisfaction, maternal outcome of parturient mothers.

In the control group and experimental group there was no significant association between the obstetric variables and level satisfaction before and after clinical pathway. Hence the study exhibits that there was no relationship between the obstetric variable and the level of satisfaction, so the midwife need to play a key role in providing organized care by inculcating clinical pathway in practice.

In the control and experimental group there was no significant association between the obstetric variables and maternal outcome before and after clinical pathway. This showed that all mothers develop positive maternal outcome, irrespective of their obstetric variables. It is the midwives responsibility to adopt the clinical pathway in day to day practice for parturient mothers.

Summary

This chapter has dealt about the discussion of various aspects of the study findings. This emphasized on the demographic variables of nurses, demographic and obstetric variables of the parturient mothers. It has also dealt about the mean and standard deviation of level of knowledge and their practice scores in the pre and post test, maternal level of satisfaction and outcome in the control and experimental groups. The discussion has been made with various research articles and current statistical data presented with the journals to support the researcher findings.

Chapter VI

Summary, Conclusion, Implications and Recommendations

CHAPTER – VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

SUMMARY

A Quasi Experimental Study to Assess the Effectiveness of Clinical pathway for Parturient Mothers upon the Knowledge and Practice of Nurses and Maternal outcome at Apollo First Med Hospital, Chennai.

The Objectives of the Study

1. To assess the pre and post-test level of knowledge and practice of nurses regarding clinical pathway for parturient mothers.
2. To evaluate the effectiveness of clinical pathway for parturient mothers upon the knowledge and practice of nurses.
3. To assess and compare the maternal outcome in control and experimental group of parturient mothers with.
4. To determine the level of satisfaction of nursing care in the control and experimental groups of parturient mothers.
5. To determine the association between the selected demographic variables of nurses with their pre and post-test level of knowledge of parturient mothers.
6. To determine the association between the selected demographic variables with maternal outcome and level of satisfaction in control and experimental groups of parturient mothers.

7. To determine the association between the selected obstetric variables with maternal outcome and level of satisfaction in control and experimental groups of parturient mothers.

Null Hypotheses

Ho_1 There will be no significant difference between pre and post-test level of knowledge and practice of nurses regarding clinical pathway for parturient mothers.

Ho_2 There will be no significant difference in the maternal outcome and level of satisfaction between the control and experimental group of parturient mothers.

Ho_3 There will be no significant association between selected demographic variables with their pre and post-test level of knowledge among nurses regarding clinical pathway for parturient mothers.

Ho_4 There will be no significant association between selected demographic variables with maternal outcome and the level of satisfaction in control and experimental group of parturient mothers.

Ho_5 There will be no significant association between selected obstetric variables with maternal outcome and the level of satisfaction in control and experimental group of parturient mothers.

The conceptual frame work of the study was based on "King's Goal Attainment Theory". The study variables were effectiveness of clinical pathway for parturient mother. Null hypotheses were formulated. The level of significance selected was $p<0.001$. An extensive review of literature was made based on the opinions of the experts. A Quasi

experimental study of one group pre-test and post-test design for nurses, control and experimental group of parturient mothers were used. The study included 12 nurses and 60 parturient mothers with selected sampling technique. The study was conducted in labor wards where the parturient mothers admitted at Apollo First Med Hospitals, Chennai.

The level of knowledge and practice rating scale was used for the nurses. The level of satisfaction and the maternal outcome were observed for the parturient mothers through the rating scale. Administered pre-test structured knowledge questionnaire regarding clinical pathway for parturient mothers to the nurses and observed with the existing nursing practice. Checked out the maternal outcome and their level of satisfaction with existing nursing practice through rating scale. Taught the nurses about the clinical pathway and implemented the clinical pathway for parturient mothers. Administered the post-test structured knowledge questionnaire to the same nurses after 7 days. Observed the nursing practice & checked the maternal outcome and their satisfaction with clinical pathway for parturient mothers. The data were analyzed by descriptive and inferential statistics.

Major findings of the study

Characteristics of the sample

The present study shows that Majority of the nurses were at the educational qualification of B.Sc.(N),(75%)., were living in the hostel (66.7%) with the income of about Rs.5000-7500 (58.3%) and information about clinical pathway (66.7%), Most of the nurses were at the age group of above 22-24years (75%) and married (66.7%) with working experiences< 1 years (50%).

Most of the mothers in the control group and experimental group were between the age group of 24-30 years (73.3%, 73.3%), had graduate (53%, 83.3%), with monthly income about Rs.20001-40,000 (73.3%, 73.3%), Majority of the mother in both control and experimental group married at the age 20- 23 years (83.3%, 73.3%) and majority of mothers in both the group were home makers (76.7%, 73.3%) living as a joint family (66.7%,50%) respectively.

Majority of the mothers in both the control and experimental group were between the gestational age of 38–39weeks (73.3%, 56.7%) and order of pregnancy were primi gravid (60%, 56.7%) respectively. All the mothers in both the group had more than five antenatal visits (100%, 100%) and majority of them mothers undergone normal vaginal delivery (53.3%, 56.7%).Majority of the mothers in the control and experimental group had no complication(80%, 86.7%) with no co-morbidity (93.3%, 93.3%) respectively.

Comparison of pre & post-test level of knowledge for nurses and practice scores

All of the nurses (100%) had adequate knowledge after the post-test. In the pre-test most of the nurses (75%) had moderately adequate knowledge. Both the control and experimental group of parturient mothers were having compliance of activities are adequate and moderate practice (100%), but there is significance difference between these groups.

Comparison of level of satisfaction and maternal outcome in control and experimental group of parturient mothers

That majority of the parturient mothers in the control group (66.7%) had highly satisfied in the nursing care. In the experimental group, all of the mothers (100%) had highly satisfied in the nursing care. All of the mothers were not developed any complications (100%) in the control group and experimental group

Mean and standard deviation of knowledge and practice scores of nurses and level of satisfaction with their outcome of parturient mothers

The mean and standard deviation of level of knowledge of nurses were low in the pre-test (M= 14.9, SD=2.5) in comparison to the post-test (M=21.6, SD-1.91), with the obtained‘t’ value of 10.27 ($p<0.001$). This clearly indicates that there is a significant difference in the knowledge of nurses after implementation of structured knowledge questionnaire on clinical pathway for parturient mother. Hence the null hypothesis Ho_1 is rejected.

The mean and standard deviation of practice scores of nurses were high in the experimental group clinical pathway administered (M= 298, SD=9.85) in comparison to the before clinical pathway administration (M=235.5, SD=4.9). This was statistically proven at $p<0.001$ level of confidence. This clearly indicates that there is a highly significant effectiveness of clinical pathway upon the nurses on parturient mothers. Hence the null hypothesis Ho_1 was rejected.

Mean and standard deviation of level of satisfaction of parturient mothers in the experimental group (M= 78.9, SD=10.73) is high when compared to the control group (M=100.5, SD= 7.15). This was statistically proven at $p<0.001$ level of confidence and it shows that effectiveness of clinical pathway upon the level of satisfaction of the parturient mothers. Hence the null hypothesis Ho_2 was rejected.

The mean and standard deviation of the maternal outcome of parturient mothers in the experimental group (M= 9.7, SD=5.2) is low when compared to the control group (M=2.7, SD= 3.5) which indicates the experimental group of mothers are not developed complications. This was statistically proven at $p<0.001$ level of confidence and it shows that effectiveness of clinical pathway upon the maternal outcome of the parturient mothers. Hence the null hypothesis Ho_2 was rejected

Association between the Demographic variables and maternal outcome of parturient mothers

There is no association between the demographic variables like age, religion, occupation and income per month with the maternal outcome in the control group and experimental group of parturient mothers. Hence null hypothesis Ho_4 was accepted. No statistics could be applied to find the association between selected demographic variables and the maternal outcome. Hence the null hypothesis Ho_4 was retained.

Association between the Demographic variables and level of satisfaction of parturient mothers

There is no association between demographical variables like age, religion, educational qualification, and type of family with the level of satisfaction in the control and experimental group of parturient mothers. Hence the null hypothesis Ho_4 was retained.

Association between the Obstetrical variables and level of satisfaction of parturient mothers

There is no association between obstetrical variables like gestational weeks at delivered, no of antenatal visits, order of pregnancy and co-morbidity with the level of satisfaction in the control group and experimental of parturient mothers. Hence the null hypothesis Ho_5 was retained.

Association between the Obstetrical variables and maternal outcome of parturient mothers

There is no association between the obstetrical variables and the maternal outcome in both experimental and control group of parturient mothers. Hence the null hypothesis Ho_5 was retained.

Conclusion

This study shows that effectiveness of the clinical pathway on patients with hysterectomy. The researcher found that there is increase in knowledge after post-test

among the nurses with practice of clinical pathway checklist. Among the hysterectomy patients in the control and experimental group, the level of satisfaction and clinical outcome differs with slight significant differences. Finally the researcher reveals that the clinical pathway is very essential for practicing the nursing care activities among all groups of clients with varying clinical condition.

Implications

Nursing Practice

Clinical Pathways are structured, multidisplinary plans of care designed to support the implementation of clinical guidelines and protocols. They are designed to support clinical management, clinical and non-clinical resource management, clinical audit and also financial management. They provide detailed guidance for each stage in the management of a patient treatments & interventions with a specific condition over a given time period, and include progress and outcomes details. Clinical Pathways aim to improve, in particular, the continuity and co-ordination of care across different disciplines and sectors.

Nursing Education

The nursing care plan is a commonly used teaching tool in nursing education. By developing individualized nursing care plans for specific clients, students practice use of nursing process and making clinical judgments and decisions. However, the system of managed care has impacted current clinical practice, and many health care agencies have shifted their emphasis from requiring the traditional columnar nursing care plans to use of

clinical pathways and standards of care. As result of this trend, nursing educators are faced with the problem of preparing students to cope with today's reality in clinical practice. In response to this problem, this article re-examines the practical utility of the traditional nursing care plan in nursing education. The article also introduces a collaborative nursing care plan, the integration of the clinical pathway with the traditional nursing care plan, and its application in teaching.

Nursing Administration

Clinical pathways (integrated care pathways) can be seen as an application of process management thinking to the improvement of patient healthcare. An aim is to re-centre the focus on the patient's overall journey, rather than the contribution of each specialty or caring function independently. Instead, all are emphasized to be working together, in the same way as a cross-functional team. More than just a guideline or a protocol, a care pathway is typically crystallized in the development and use of a single all-encompassing bedside document, that will stand as an indicator of the care a patient is likely to be provided in the course of the pathway going forward; and ultimately as a single unified legal record of the care the patient has received, and the progress of their condition, as the pathway has been undertaken.

Nursing Research

Clinical pathway is using as a audit tool identify the characteristics of care well organized processes. The different research has been conducted on clinical pathway with various clinical conditions to identify the effectiveness on the patients care. The literature

also suggests that clinical pathways must be developed, implemented, and evaluated utilizing validated methods including the use of best practice standards and can facilitate learning and change by employing a multitude of competencies while maintaining a sphere of influence over patient and families, nurses, and the system.

Nursing Theory

Clinical pathway is the tool that effectively maintains the quality and control the cost of medicine helps in formulating new model of knowledge. It helps in formulating a fundamental theory to facilitate the construction of a flexible system. Clinical pathway promotes developed cost-effective and quality health care system using variations and takes decision from support systems. In this study, the researcher presented as Jean Ball Deck Chair conceptual framework for postnatal mothers. It mainly focuses the maternal well-being by strengthening the maternity services. From this framework, the changes of theory can also made in future and produce it into new theory.

Recommendations

- The same study can be conducted on a larger sample for better generalization.
- The study can be replicated in different settings
- A comparative study can be conducted between parturient mother and caesarian section mother.
- A comparative study can be conducted in different settings with similar facilities.

References

REFERENCES

Abdel, R.M., & Berggren, V. (2011).Parturient Needs during Labor: Egyptian Women's Perspective toward Childbirth Experience, a Step toward an Excellence in Clinical Practice. **Journal of Basic and Applied Scientific Research**.1 (12), 2935-2943.

Al-bdour, A.N., Akasheh, H.F., & Al-Husban, N.A. (2004).Ultrasonography of the uterus after normal vaginal delivery. **Saudi Medical Journal**, 25(1), 41-4.

Basse, L. et al. (2000). A Clinical Pathway to Accelerate Recovery after Colonic Resection**.** Annals of Surgical, 232(1), 51–57.

Bick, D.E., Rycroft,J., & Fontenla,M.(2009). A case study evaluation of implementation of a care pathway to support normal birth in one English birth centre: anticipated benefits and unintended consequences. **BMC Pregnancy and Childbirth,**9(1), 47

Carolin. (2010).The increased Perceived Image of Nurse will not affect the Patient Satisfaction. **The Nurse International journal**, 3(2), 10-11.

Chalmers, B., & Porter, R. (2001). Assessing effective care in normal labor: the bologna score. **Birth issues of journals**,28(2),79-83.

Chang, M.Y., Chen, S.H., & Chen, C.H.(2002). Factors related to perceived labor pain in primipara. **Kaohsiung journal of medical science**, 18(12), 604-9.

Cheney., & Louise,J. (2005). ***Evaluation of the effectiveness of a clinical pathway for bronchiolitis.*** Masters by Research thesis, Queensland University of Technology. Retrived Dec 3 from http://eprints.qut.edu.au/16100

Cherry.B., & Jacob,S.R.(2006). **Contemporary Nursing Trends, Issues and Management** (3rd Ed). Missouri: Mosby.460-64.

Clerici,C. (1999). **Modifications of respiratory function during pregnancy**. Retrieved September 05, from http://www.ncbi.nlm.nih.gov/pubmed/10637899.

Dutta,D.C.(2004). **Text book of Obstetrics including Perinatology and Contraception** (6th ed.). Calcutta: New Central Book Agency.

Fraser, M., & Cooper, A. (2001). **Myles Text book for Midwives** (13th ed.) Philadelphia, Churchill Livingstone.

Hunter, B., & Segrott, J.(2010). Using a Clinical Pathway to Support Normal Birth: Impact on Practitioner Roles and Working Practices. **Birth issues in Perinatal Care**, 37(3), 227-236.

Jacob, A. (2004). **A comprehensive textbook of Midwifery**, New Delhi, Jaypee brothers medical publishers (P) Limited.

Kova, K.J. et al. (2004). Clinical Pathway for Hip Fractures in the Elderly: The Hospital for Joint Diseases Experience. **Clinical Orthopaedics & Related Research**,425,72-81.

Francine, H., Nichols.,& Elaine, Z. (1997). **Maternal , Newborn Nursing, TheoryAnd Practice** (1st ed.). Philadelphia: W.B. Saunders Company.660 - 665.

Leonard, D., & Perry,S.E.(2004). **Maternity and women's health care** (8th ed) Missouri: Mosby Publishers. 480-526.

Lobo, D.(2010). Nurses Knowledge regarding preventive and Emergency Management of acute Pospartum complication. **The Nurse International**,3(4), 14-16.

Loeb, M. et al. (2006). Effect of a Clinical Pathway to Reduce Hospitalizations in Nursing Home Residents with Pneumonia. **The journal of American medical association**, 295(21),2503-2510.

Mabrey, J.D. et al. (1997).Clinical pathway management of total knee arthroplasty. **Clinical Orthopaedics Related Research**, 345, 125-33.

Muheling, B.M. et al. (2008) Reduction of postoperative pulmonary complications after lung surgery using a fast track clinical pathway. **Europian journal of thoracic surgery**. 34(1), 174-180.

Nancy, E. R., & Deanna, L.P. (1997).Maternal Age and Birth Outcomes: Data from New Jersey.**Journal of Family Planning Perspectives,** 29(2),14-15.

Patterson, D.A., Winslow, M., & Matus ,C.D. (2008). Spontaneous vaginal delivery. **Winslo American Family Physician,** 78(3),336-41.

Peng, H. et al.(2011).The effects of labor on differential gene expression in parturient women, placentas, and fetuses at term pregnancy. **The Kaohsiung Journal of Medical Sciences,** 27(11), 494–502.

Pilliteri, A. (2003). **Maternal And Child Health Nursing-Care Of Child Bearing and Child Rearing Family**. (14th ed). Philadelphia: Lippincott Williams Wilkins.

Polit, H., & Beck, C.T. (2004). **Nursing Research Principles and Methods.** (7th ed).Philadelphia: Lippincott Williams Wilkins.

Potter, P.A., & Perry, A.G. (2005). **Fundamentals of Nursing,** (6th ed), Missouri: Elsevier publication.1253-1255.

Prabhakara, G.N. (2006). **Biostatistics** (1st ed.). New Delhi: Jaypee Brothers Medical Publishers. 162 – 170.

Ransom, S.B. et al. (2010).The development and implementation of normal vaginal delivery clinical pathways in a large multihospital health system. **American Journal of Managed Care**, 4(5), 723-7.

Rao, P.S., & Richard, J. (2006). **Introduction to Biostatistics and Research Methods** (4th ed.). New Delhi: Prentice-Hall of India, 75 – 80.

Reader, J., Martin, l., & Deborab,G.(1997) **Maternity Nursing** (18th ed.), Philadelphia: Lippincott Willianms and Wikins.

Rider, J., & Love, C. (2008). **Nursing In Today's World. Trends, Issues and Management** (9th Ed). Philadelphia: Lippincott. 50, 440.

Roberts, H.C. et al. (2004). The effectiveness of implementing a care pathway for femoral neck fracture in older people: a prospective controlled before and after study. **Oxfort journals,**33(2), 178-184.

Sauls, D.J. (2007). Nurses attitudes towards provision of care and related health outcomes. **The Nursing Research journal**, 56 (2), 117-23.

Scarabotto, L.B., & Riesco, M.L.(2006). Factors related to perineal trauma in normal births in nulliparous.**Birth issues of journals**, 40(3), 389-395

Segal, S. (2010). Labor epidural analgesia and maternal fever. **Journal of Anasthesia and analgesia**, 111(6),1467-75.

Sherkhane, S. et al.(2009) Assess the utilization pattern of antenatal care services and factors affecting utilization of these services among Pregnant women of Urban slums; **Asian journal of Obstetrics and Gynac Practice**, 1(1), 24-27.

Thomas, M.J. (2004). A Controlled Trial of a Critical Pathway for Treatment of Community-Acquired Pneumonia. **The journal of american medical association**.283 (6), 749-755.

Wanyonyi, S.Z.,& Karuga,R.N.(2010). The utility of critical care pathways in determining perinatal outcomes for women with one previous casarean section, a retrospective service evaluation. **BMC Pregnancy and Childbirth**, 10(62), 1471-2393.

Wilson. I.B, & Cleary P.D, (1995).Linking Clinical Variables With Health-Related Quality of Life. **The journal of American medical association**, 273 (1), 59-65.

Appendices

APPENDIX – I

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

Apollo College of Nursing

(Recognised by the Indian Nursing Council and Affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai)

CO/0157/11 15.03.11

To

The Medical Superintendent,
Apollo First Med Hospital,
154, Poonamalle High Road,
Kilpauk,
Chennai-10.

Respected Sir / Madam,

Sub.: To request permission for research study – Reg.

Greetings! As part of the curriculum requirement our 2nd year M. Sc. (N) student Ms.U.Rajeswari has selected the following title for her research study.

"A Quasi experimental study to assess the effectiveness of clinical pathway for parturient mother upon the knowledge and practice of nurses and maternal outcome at Apollo Hospitals, Chennai".

So I kindly request your goodselves to permit her to conduct study in your esteemed institution.

Thanking You,

Dr. LATHA VENKATESAN
PRINCIPAL
IS/ISO 9001:2000

(08+9 yrs)

21/3/11

Vanagaram to Ambattur Main Road, Ayanambakkam, Chennai - 600 095.
Ph. : 044 - 2653 4387 Tele fax : 044 - 2653 4923 / 044- 2653 4386

APPENDIX-II

LETTER REQUESTING OPINIONS AND SUGGESTIONS OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY OF RESEARCH TOOL

From

MS. U.Rajeswari,
M.Sc., (Nursing) Second Year,
Apollo College of Nursing,
Chennai - 600095.

To

Forwarded Through:
Dr. LathaVenkatesan,
Principal,
Apollo College of Nursing.

Sub: **Requesting for opinions and suggestions of experts for establishing content validity for resrarch tool.**

Respected Madam,

I am a postgraduate student of the Apollo College of Nursing, I have selected the below mentioned topic for research project to be submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai as a partial fulfillment of Masters of Nursing Degree.

TITLE OF THE TOPIC:

"A quasi experimental study to assess the effectiveness of clinical pathway for parturient mother upon the knowledge and practice of nurses and maternal outcomes at Apollo hospitals, Chennai"

With regards may I kindly request you to validate my tool for its appropriateness and relevancy. I am enclosing the Background, Need for the study, Statement of the problem, Objectives of the study, Demographic Variable Proforma, Obstetric Variable Proforma, Modified Pain Intensity Scale, Coping scale, WHO modified Partogram, and rating Scale on Level of Satisfaction of mothers with Ice Massage, for your reference. I would be highly obliged and remain thankful for your grate help if you could validate and send it as soon as possible.

Thanking you,

Yours sincerely,
(U.RAJESWARI)

APPENDIX – III
LIST OF EXPERTS

Dr. LathaVenkatesan., M.Sc (N). M.Phil., Ph.D.,

Principal cum Professor,

Apollo College of Nursing,

Chennai - 600095.

Dr. VinuthaArunachalam., M.D. OG.,

Consultant Obstetrician &Gynaecologist,

Apollo Hospitals,

Chennai - 600010

Mrs. Lizy Sonia., M.Sc (N)., Ph.D.,

Vice Principal cum Professor,

Apollo College of Nursing,

Chennai - 600095.

Mrs. Vijaya Lakshmi., M.Sc (N)., Ph.D.,

Research coordinator cum Professor.

Apollo College of Nursing,

Chennai - 600095.

Mrs. Shobana., M.Sc (N).,

Professor,

Apollo College of Nursing,

Chennai - 600095.

Mrs. NesaSathyaSatchi, M.Sc (N).,

Reader

Apollo College of Nursing,

Chennai - 600095.

Ms. Pappy Yuvarani., M.Sc (N),

Lecturer,

Apollo College of Nursing,

Chennai - 600095.

APPENDIX – IV

Ethics Committee

22 June, 2011

To,
Ms. U. Rajeswari
1st Year M.Sc (Nursing)
Dept. of Obstetrics & Gynaecology
Apollo College of Nursing, Chennai
Tamil Nadu, India

Ref: Effectiveness of clinical pathway for parturient mothers

Sub: Your letter dated 9 June, 2011 for approval of the above referenced project and its related documents

Dear Ms. U. Rajeswari,

Ethics committee – Apollo Hospitals has received the following document submitted by you related to the conduct of the above – referenced study.

- Project Proposal titled "Effectiveness of clinical pathway for parturient mothers"
- Study Performa

The above-mentioned documents have been reviewed and approved (through expedited review) by the Chairman, Vice-Chairman and Member Secretary at a specially convened meeting of the Ethics Committee. The study is hereby approved to be conducted by you in the presented form.

The following Ethics Committee members were present at the meeting held on 22 June, 2011

Name	Profession	Position in the committee
Mr. S. S. Narayanan	Ethicist	Chairman
Dr.Radha Rajagopalan	Clinician	Vice - Chairman
Dr. Jayanthi Swaminathan	Sr.GM Clinical & Collaborative Research	Member Secretary

Ethics Committee

Apollo HOSPITALS
TOUCHING LIVES

After due ethical and scientific consideration, the Ethics Committee has approved the above presentation submitted by you. Since your dissertation does not involve any administration of drug(s) or therapeutic composition(s) to patients and involves only interpretation of collected data, the Ethics Committee has decided to waive the requirement of informed consent.

The Ethics Committee is constituted and works as per ICH-GCP, ICMR and revised Schedule Y guidelines.

Yours sincerely,

Radhakrishnan

Date 22/6/11

Dr. Radha Rajagopalan
Ethics Committee – Vice Chairman
Apollo Hospitals, Chennai

DR. RADHA RAJAGOPALAN
Vice Chairman
Ethics Committee
Apollo Hospitals Enterprise Limited
Chennai-600 006. Tamil Nadu

APPENDIX – V

Research Participation Consent Form

Dear Participant,

I am a M.Sc. Nursing student at Apollo College of Nursing, Chennai. As a part of my study, a research on "Effectiveness of clinical pathway for patient with hysterectomy upon the knowledge and practice of nurses and patient outcomes" is selected to be conducted. The findings of the study will be helpful in improving the patients outcome.

I hereby seek your consent and co-operation to participate in the study. Please be frank and honest in your responses. The information collected will be confidential and anonymity will be maintained.

Signature of the Researcher

I _____, hereby consent to participate and undergo the study.

Signature of the Participant

APPENDIX – VI

CERTIFICATE FOR ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation "**A quasi experimental study to assess the effectiveness of clinical pathway for parturient mothers upon the knowledge and practice of nurses and maternal outcomes at Apollo hospitals, Chennai**" by

Ms. U. Rjeswari, II Year M.Sc (N), Apollo College of Nursing was edited for English language appropriateness by

Signature

A. NAVIN, M.A., B.Ed., M.Phil.,
ASSISTANT PROFESSOR
DEPARTMENT OF ENGLISH

APPENDIX-VII

PLAGIARISM DETECTOR – ORGINALITY REPORT

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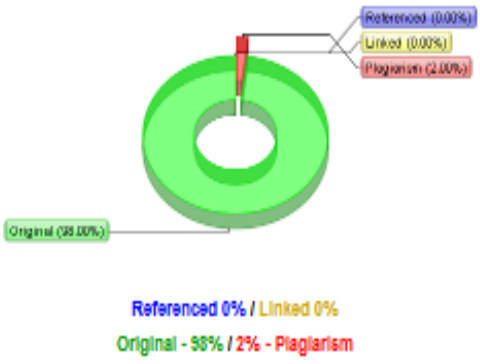

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Referenced 0% / **Linked 0%**

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ENDIX-VIII

DEMOGRAPHIC VARIABLE PROFORMA OF NURSES

Purpose:

This Proforma is used to measure the demographic variables of nurses such as age, sex, marital status, education, religion, type of the family, year of experience, type of residential area, income.

Instruction:

The investigator will collect data by asking questions from the participants by making a tick (√) mark to fill the details.

1. Sample no :

2. Age in years

2.1 ≤ 21 ☐

2.2 22 to 24 ☐

2.3 25 to 29 ☐

2.4 ≥ 30 ☐

3. Religion

3.1 Hindu ☐

3.2 Muslim ☐

☐

3.3 Christian

3.4 Others ☐

4. Educational status

4.1 Diploma in nursing ☐

4.2 B.Sc (N) ☐

4.3 P.B.Sc (N) ☐

4.4 Post certificate course ☐

5. Years of experience

5.1 0- 1 yrs ☐

5.2 2- 4 yrs ☐

5.3 5 – 7 yrs ☐

5.4 > 8 yrs ☐

6. Marital status

6.1 Married ☐

6.2 Single ☐

7. Type of the residential area

7.1 Home ☐

☐

7.2 Hostel

8. Income per month in Rupees

8.1 < 5000 ☐

8.2 5001 to 7500 ☐

8.3 7501 to 10,000 ☐

8.4 > 10,000 ☐

9. Previous information acquired regarding clinical pathway

9.1 Yes ☐

9.2 No ☐

10. If yes, what was the source of information?

10.1 Books ☐

10.2 Journals ☐

10.3 Magazines ☐

10.4 colleagues ☐

APPENDIX-IX

DEMOGRAPHIC VARIABLE PROFORMA OF PARTURIENT MOTHER

Purpose:

This Proforma is used to measure the demographic variables of parturient mother such as age, education, occupation, age at marriage, order of pregnancy, number of children, religion, type of family, co morbidity.

Instruction:

The investigator will collect data by asking questions from the participants and with hospital records by making a tick (√) mark to fill the details.

1. Sample Number :

2. Age

2.1≤ 20 ☐

2.2 21 to 23 ☐

2.3 24 to 30 ☐

2 .4 >30 yrs ☐

3. Religion

3.1 Hindu ☐

☐

3.2 Muslim ☐

3.3 Christian ☐

3.4 Others (specify) ☐

4. Education

4.1 Illiterate ☐

4.2 Primary school ☐

4.3 Middle school ☐

4.4 High school ☐

4.5 Graduate ☐

4.6 Post-graduate ☐

5. Occupation

5.1 Working ☐

5.2 Not working ☐

6**. Age at marriage in years**

6.1 < 19 ☐

6.2 20 to 23 ☐

6.3 24 to 27 ☐

6.4 27 to 30 ☐

6.5 > 30

7. Type of the family

7.1 Nuclear ☐

7.2 Joint ☐

8 Family Incomes in rupees

8.1 10, 0000 – 20,000 ☐

8.2 20,001 – 40,000 ☐

8.3 40,001- 60,000 ☐

8.4 > 60,000 ☐

APPENDIX-X

OBSTETRIC VARIABLE PROFORMA

Purpose

The proforma is used by the investigator to collect data on obstetric variables such as gestational age in weeks, number of antenatal visits, order of pregnancy, type of delivery, duration of first stage, second stage, and third stage, fourth stage of labor, co morbidity, and complication during labor.

Instruction

The hospital records will be used by the investigator to fill the following details.

1. Gestational age in weeks

1.1 37-38 ☐

1.2 39-40 ☐

1.3 41-42 ☐

2. Number of antenatal visits

2.1 No visit ☐

2.2 ≤ 4 ☐

2.3 > 5 ☐

3.Order of pregnancy

3.1 Primigravida ☐

3.2 Second gravida ☐

3.3 Third gravida ☐

3.4 Multi-gravida ☐

4. Type of delivery

4.1 Normal vaginal delivery ☐

4.2 Vacuum delivery ☐

4.3 Forceps delivery ☐

5. Duration of 1ST stage of labor

5.1 <10 hours ☐

5.2 10-14 hours ☐

5.3 >14 hours ☐

6. Duration of 2nd stage of labor

6.1 <1 hour ☐

6.2 1 hour – 2 hour ☐

6.3 >2hour ☐

☐

7. Duration of 3rd stage of labor

7.1 <10 minutes

7.2 10 -20 minutes ☐

7.3 > 20 minutes ☐

8. Duration of 4th stage of labor

8.1 1 hour ☐

8.2 2 hour ☐

8.3 3 hour ☐

9. Co morbidity

9.1 H/O illness before pregnancy ☐

9.2 H/O illness during pregnancy ☐

9.3 No H/O illness ☐

10. Complication arise during labor

10.1 Yes ☐

10.2 No ☐

APPENDIX-XI

BLUE PRINT ON

KNOWELEDGE QUESTIONAIRE REGARDING CLINICAL PATHWAY FOR PARTURIENT MOTHER

S.NO	CONTENT	ITEMS	TOTAL ITEMS	PERCENTAGE
1.	Clinical pathway	1,2,3,4,5	5	18.5%
2.	1st stage of labor	6,7,8,9,10	5	18.5%
3.	2nd stage of labor	11,12,13,14,15	5	18.5%
4.	3rd stage of labor	16,17,18,19,20	5	18.5%
5.	4th stage of labor	21,22,23,24,25	5	18.5%
		TOTAL	25	100%

STRUCTURED QUESTIONAIRE ON KNOWLEDGE REGARDING CLINICAL PATHWAY FOR PARTURIENT MOTHER

Purpose:

This structured questionnaire is used to collect information on knowledge of nurses regarding clinical pathway for parturient mother.

Instructions:

The structured questionnaire consists of multiple choice questions. Please read the questions and the answers given. Place (√) mark against the right answer for each question. Please be frank in your responses. The information collected will be kept confidential and anonymity will be maintained

1. What is meant by Clinical pathway?

a) Multidisciplinary team work ☐

b) Individual activity ☐

c) Nurses activity ☐

d) Doctor's activity ☐

2. Which one is not the synonymous for Clinical pathway?

a) Integrated care pathway ☐

b) Care maps ☐

c) Nursing care pathway ☐

d) Critical pathway ☐

3. What are the components of clinical pathway?

a) Care, outcome, intervention ☐

b) Activities, intervention, outcome ☐

c) Activities, intervention, variance, outcome ☐

d) Care, cure, core ☐

4. Which of the following is the Clinical pathway team? ☐

a) Nurses only ☐

b) Expert Physician only ☐

c) Multi-disciplinary team ☐

d) Administrative officers ☐

5. Which one is the Issue related to clinical pathway? ☐

a) Problems in documentation ☐

b) Risk for acceptance in workplace ☐

c) Increases the cost for implementation ☐

d) Reduces the infection ☐

6. When the mother can be admitted to the labor ward?

a) After 34 weeks of gestation ☐

b) With signs of true labor pain ☐

c) Absence of fetal movement ☐

d) Excessive fetal movement ☐

7. How frequently vital signs have to be checked in latent phase labor?

a) Every 1 hrs ☐

b) Every 2 hrs ☐

c) Every 3hrs ☐

d) Every 4 hrs ☐

8. What is the advantage of ambulation in early labor?

a) Prevent complication of labor ☐

b) Gravity increase the decent of fetal head ☐

c) Increase fetal circulation ☐

d) Prevent cord prolepses ☐

9. What should be done immediately after the rupture of membrane in early labor?

a) Check the blood pressure ☐

b) Check the color of liquor ☐

c) Check the fetal heart rate ☐

d) Check the pulse rate ☐

10. How frequently FHR has to be checked in 1st stage of labor?

a) Every 1hr ☐

b) Every 30 minutes ☐

c) Every 15 minutes ☐

d) Every 5 minutes ☐

11. What is the advantage of providing perineal support during the delivery of head?

a) Prevents perineal laceration ☐

b) Prevents prolapse umbilical cord ☐

c) Prevents crowning from taking place ☐

d) Prevents rupture of membrane ☐

12. What is meant by Partogram?

a) Graphical representation of the changes that occur in labor process ☐

b) Graphical representation of pregnancy changes ☐

c) Graphical representation of postpartum changes ☐

d) Graphical representation of dietary changes in labor ☐

13. What is the purpose of telling the mother about emptying the bladder?

a) Prevent urinary infection ☐

b) Prevent to interrupted to labor ☐

c) Prevent to obstruction of head descent ☐

d) Prevent to perineal laceration ☐

14. Which one is the comfortable position for 2nd stage of labor?

a) Supine position ☐

b) Lateral position ☐

c) Standing position ☐

d) Sitting position ☐

15. What is the right time for episiotomy?

a) After crowning ☐

b) After head is delivered ☐

c) Just prior to crowning ☐

d) Just prior to expulsive contraction ☐

16. When will you declare the sex of the baby to mother?

a) After delivering the baby ☐

b) After delivering the placenta ☐

c) After suturing the episiotomy wound ☐

d) After delivering the head of the baby ☐

17. What is the normal Apgar score?

a) 1-10 ☐

b) 0- 3 ☐

c) 4-6 ☐

d) 7- 10 ☐

18. How to prevent hypothermia?

a) Follow aseptic technique ☐

b) Follow cold chain ☐

c) Follow warm chain ☐

d) Follow protective measures ☐

19. When will you suction the newborn?

a) After delivered head ☐

b) After delivered the baby ☐

c) After shift to the ward ☐

d) Before shift to the ward ☐

20. Who is supposed to receive the baby after delivery?

a) A pediatrician ☐

b) An anesthetist ☐

c) A nurse ☐

d) A worker ☐

21. When will you initiate breast feed after normal delivery?

a) Within 30 minutes ☐

b) Within 2 hrs ☐

c) Within 3 hrs ☐

d) Within 4 hrs ☐

22. What is the level of the fundus immediately following delivery?

a) Symphysis pubis ☐

b) Umbilicus ☐

c) Within the pelvis ☐

d) Between Symphysis pubis and umbilicus ☐

23. What is the immediate responsibility of nurse following delivery of the baby?

a) Check vital signs ☐

b) Check hemoglobin ☐

c) Assess psychological changes ☐

d) Monitor urine output ☐

24. How frequently the vital signs have to be checked in the 4th stage of labor?

a) Every 1 hr ☐

b) Every ½ hr ☐

c) Every 15 mts ☐

d) Every 5 mts ☐

25. Which are the following advantages of the skin to skin contact EXCEPT?

a) Improve bonding ☐

b) Improve circulation ☐

c) Improve Breast feeding ☐

d) Improve weight gain ☐

KEY ANSWERS

1.	a
2.	c
3.	c
4.	c
5.	b
6.	b
7.	d
8.	b
9.	b
10.	a
11.	a
12.	a
13.	b
14.	b
15.	c
16.	b
17.	d
18.	c
19.	a
20.	c
21.	a
22.	d
23.	a
24.	c
25.	d

Score	Percentage	Level of knowledge
<15	<50	Inadequate
15 to 22	51 to 75	Moderate adequate
23 to 30	>76%	High satisfaction

APPENDIX- XII

CLINICAL PATHWAY PRACTICE CHECK LIST FOR PARTURIENT MOTHER

Name of the mother :

Age :

IP no/ Ward :

Date and time of delivery :

Sex of the baby :

Note:

1. **Compliant (C) :** It refers to an activity that has been completed by the nurse, then the researcher mention as compliant
2. **Partially compliant (PC) :** It indicates that the nurse attempted to perform the activity but not completed, then the researcher mention as partially compliant**.**
3. **Non-compliant (NC) :** It refers to an activity neither attempted nor completed, then the researcher mention as non-complian

HENDERSONS CONCEPTS OF ADL MODEL	LATENT PHASE	C	PC	NC	ACTIVE PHASE	C	PC	NC	TRANSITION PHASE	C	PC	NC
Clinical Assessment	1.1Completion of prenatal records -Patient information -Collect prenatal records -Enquiry about the onset of pain or leakage of amniotic fluids 1.2Review existing records • Number of antenatal visits • Investigation reports • Specific treatments 1.3Physical assessment • Check height • Weight • Head to foot assessment				1.1Complete bed rest 1.2Constant supervision				.1Complete bed rest 1.2Constant supervision			

	1.4Assess fetal viability											
Breathing	2.1 Provide comfort environment 2.2 Teach relaxation measures				2.1 coach breathing techniques 2.2 Encourage effleurage 2.3 Assist in using relaxation techniques between contractions				2.1 coach breathing techniques 2.2 Reduce touch if increased sensitivity is noted			
Regulatory functions	3.1 BP,P,R q 30-60 min 3.2 T q 4hrs 3.3 UC q 30-60 min 3.4 FHR q 30- 60 min 3.5 vaginal examination as needed to identify progress				3.1 BP,P,R q 30min 3.2 T q 4hrs 3.3 UC q 15-30 min, FHR q 15-30 min / continue CTG 3.5 vaginal examination as needed to identify progress				3.1 BP,P,R q 30 min 3.2 T q 4hrs 3.3 UC q 10-15min, FHR q15-30min/ continue CTG 3.5 vaginal examination as needed to identify progress			

Nutrition	4.1 Provide light foods and full liquids 4.2 Establish and maintain IV as ordered				4.1 Provide nourishment as desired				4.1 Provide clear liquids sips, ice chips			
Elimina -tion	5.1 Assess bladder and bowel pattern 5.2 Empty her bladder Q2H 5.3 Help the women ambulate to bathroom or offer bedpan				5.1Encourage voiding q2hrs 5.2 Help the women ambulate to bathroom or offer bedpan				5.1 Encourage voiding q2hrs 5.2 Help the women ambulate to bathroom or offer bedpan			
Position	6.1 Emphasize upright position				6.1Assist with position changes				6.1Assist with position changes			
Comfort	7.1 Provide hospital dress 7.2 provide privacy 7.3 put up side rails on bed				7.1 Use comfort measures desired by women				7.1 Use comfort measures according to acceptance level 7.2 Continue hydrotherapy if			

	7.4 Diversion activities				7.2 provide privacy 7.3 put up side rails on bed 7.4 Initiate hydrotherapy				effective			
Personal hygiene	8.1 perform basic hygiene measures				8.1 Assist with hygiene, perineal care				8.1Change the wet clothes			
Safety	9.1 Teach and provide safety measure				9.1provide safety measure				9.1provide safety measure			
Communication	10.1Maintain IPR				10.1Maintain IPR				10.1Maintain IPR			
Spiritual	11.1Orient to the prayer hall 11.2Meet the spiritual need of the mother				11.1Allow to prayer 11.2Meet the spiritual need of the mother				11.1Allow to prayer 11.2Meet the spiritual need of the mother			
Activity	12.1 encourage Ambulation with support				12.1Ambulation with support				12.1Promote urge to push 12.2 Encourage mother to push			

									as expulsive contraction			
Emotional support	13.1 review birth plan 13.2 Review process of labor 13.3 Redemonstrate breathing techniques 13.4 Keep informed progress, procedures				13.1 provide feedback about performance 13.2 Reduce distractions during contractions 13.3Continue to keep informed				13.1 Provide continuous support 13.2 reduce distraction 13.3 role model care measures to assist partner 13.4 continue reassurance and keep informed			
Health education	14.1Patient and family labor education 14.2 Family planning				14.1Reinforce breathing and relaxation technique 14.2Encourage support person involvement 14.3Provide explanation of labor progress				14.1Encourage support person involvement 14.2Provide explanation of labor progress			
Rest	15.1Adequate rest and sleep				15.1Adequate rest				15.1Adequate rest			

H.MODEL	2nd STAGE OF LABOR	C	PC	NC	3rd STAGE OF LABOR	C	PC	NC	4th STAGE OF LABOR	C	PC	NC
Clinical Assessment	1.1Complete bed rest 1.2 arrangement for labor 1.3 Assess each bearing-down effort				1.1 perform Apgar at 1 and 5 min 1.2 Assess response to completion of child birth process, reaction of newborn				1.1Assess perineum / episiotomy 1.2Assess lochia skin to skin contact			
Breathing	Encourage correct breathing during bearing down efforts				2.1Provide Good ventilated area 2.3Oral nasal Suctioning for baby				Provide warm environment for baby			
Regulatory functions	3.1 BP,P,R q 5-30 min 3.2 assess every contraction 3.3FHR q 5- 15min 3.4Vaginal show q 15min				BP,P,R q 15min				BP,P,R q 15min			
Nutrition	4.1Maintain hydration				4.1Maintain hydration				4.1Assess for tolerance of per oral intake			
Elimination	5.1Catheterize if needed				5.1Check baby has passed				5.1Assess bladder fullness			

	5.2 Insert catheter between contractions				urine and Meconium				5.2Assist to bathroom			
Position	6.1Help to use recommended positions that facilitate descent				6.1Assist to rest in position of comfort				6.1Assist with position changes			
Comfort	7.1Encourage overall cleanliness 7.2Assess and provide comfort measures 7.3Administer pain medications as prescribed				7.1Provide pain relief as ordered				7.1Provide comfort measure as needed			
Personal hygiene	8.1Change the wet clothes				8.1Provide hygiene measure to the baby and mother 8.2Teach and demonstrate the breast care				8.1Explain and encourage to take bath daily 8.2Explain and encourage about breast care 8.3Teach and demonstrate about the perineal care			
Safety	9.1provide safety measure				9.1provide safety measure to both mother and baby				9.1Provide non-slippery floors 9.2Orient and arrange the articles arranged nearby table 9.3Provide well protected cradle			

									to the newborn 9.4Administer antibiotic as prescribed 9.5Advice RhoGAM immunoglobulin if the mother is Rh-ve with Rh+ve baby as per order.			
Communication	10.1 Maintain good rapport while caring mother 10.2Explain adequately before doing procedures 10.3Communicate all activities performed to mother				10.1 Maintain good rapport while caring mother 10.2Explain adequately before doing procedures 10.3Communicate all activities performed to mother				10.1 Maintain good rapport while caring mother 10.2Explain adequately before doing procedures 10.3Communicate all activities performed to mother			
Spiritual	11.1Allow to pray				11.1Allow to pray				11.1Meet the spiritual need of the mother			
Activity	12.1Promote urge to push				12.1 Encourage to push				12.1Instruct mother in perineal care and pad changes			
Emotional support	13.1Follow non pharmacological treatment				13.1Follow non pharmacological treatment				13.1Encourage mother/family members to hold and touch infant			

									13.2Provide skin to skin contact of mother			
Health education	14.1Assist with pushing 14.2Encourage support person involvement				14.1Support parent/infant bonding 14.2Teach pericare				14.1Breastfeeding latch-on and positioning, if applicable 14.2Appropriate hand washing techniques 14.3Cough and deep breathing exercises 14.4Instruct in pain-relief techniques			
Rest	15.1Adequate rest				15.1 Promote and provide adequate rest immediately after delivery 15.2Encourage adequate sleep hours				15.1 Promote and provide adequate rest immediately after delivery 15.2Encourage adequate sleep hours 15.3Explain the visitors			

APPENDIX-XIII

BLUE PRINT ON

RATING SCALE ON SATISFACTION OF NURSING CARE AFTER THE IMPLEMENTATION OF CLINICAL PATHWAY FOR THE PARTURIENT MOTHER

S. No	Content	Items	Total Items	Percentage
1.	Comfort, Nursing care	1,2,3	3	20%
2.	Nutrition, Elimination, Activity	4,5,6,7	4	26.6%
3.	Personal hygiene, Safety, Spiritual need	8,9,10,11	4	26.6%
4.	Communication, Family involvement, Health education	12,13,14,15	4	26.6%
	Total	--	15	100%

RATING SCALE ON SATISFACTION OF NURSING CARE AFTER THE IMPLEMENTATION OF CLINICAL PATHWAY FOR PARTURIENT MOTHER

Purpose:

The rating scale is designed to assess the level of satisfaction of the mothers regarding the nursing care. This is assessed by the researcher after implementation of clinical pathway.

Instruction:

There are items given below. Kindly read the items. Responses extend from highlysatisfied to dissatisfy. Describe your satisfaction regarding nursing care. Give your responses freely and frankly. The responses will be kept confidential.

S.No	Items	Highly Satisfied 4	Moderately Satisfied 3	Just Satisfied 2	Dissatisfied 1
1.	Did you feel comfortable with the environment provided for you?				
2.	Did you feel comfortable when doing procedures?				
3.	Are you satisfied with the explanation given before the procedures?				
4.	Are you satisfied with the instruction given about the nutritional requirements?				
5.	Are you comfortable with the ambulation provided by the nurses?				
6.	Are you satisfied with the privacy provided by the nurse during your				

	rest?				
7.	Are you satisfied with the nurses assisting for your labor activities?				
8.	Are you satisfied with the personal hygiene provided by the nurse?				
9.	Are you satisfied with the safety measures provide by the nurse?				
10.	Are you satisfied with the spiritual need met by the nurse?				
11.	Are you satisfied with the timely administration of medications with explanation?				
12.	Are you felt comfortable with the family members support?				
13.	Are you satisfied with the nurse health talk?				
14.	Are you satisfied with the communicating nature of the nurses?				
15.	Are you comfortable with the IPR and human behavior of the nurse?				

APPENDIX-XIV

CHECKLIST FOR MOTHER'S OUTCOME WITH THE CARE PROVIDED ON PARTURIENT MOTHERS THROUGH THE CLINICAL PATHWAY

Purpose:

This checklist provides information of mother's outcome through clinical pathway.

Score 0 – Present with complications

Score 1 – Developed complications and treated

Score 2 – Not developed complications

S No	Mother's outcome	Scores		
		0	**1**	**2**
1.	**Condition of baby**	➢ Asphyxia	➢ Mild disturbance	➢ Good condition
2.	**Involutionzz of uterus**	➢ Sub-involution	➢ Position is not appropriate to the Involution of uterus	➢ Involution is properly taken place
3.	**Oxygenation**	➢ Abnormal Breathing	➢ Maintaining oxygenation with	➢ Maintaining oxygenation

		pattern related with previous illness	O2 supply	with environmental O2
4.	**Nutrition**	➢ Fluid is not tolerate to mother	➢ Less fluid consumption	➢ Tolerance level of fluid.intake
5.	**Elimination**	➢ Emptied with rubber catheter	➢ Void scanty of urine	➢ Normal bladder pattern and bowel pattern
6.	**Rest**	➢ Restless ➢ Sleep disturbances ➢ Irritability	➢ Reduced rest and sleep	➢ Adequate rest and sleep
7.	**Comfort**	➢ Needs pain medication	➢ Pain reduced with comfort measures	➢ Able to cope with the pain
8.	**Regulatory functions**	➢ Abnormal vital signs	➢ Altered vital signs	➢ Normal vital signs
9.	**Personal hygiene**	➢ Poor hygiene	➢ Improper hygiene	➢ Good personal hygiene
10.	**Communication**	➢ Not well communicating	➢ Poor communicating	➢ Well communicating
11.	**Activity**	➢ No activity	➢ Lethargic activity	➢ Good activity

12.	**Diversion needs**	➢ Presence with psychological disturbances	➢ Mild psychological disturbance	➢ No need of diversion activity
13.	**Health teaching**	➢ Not breast feeding ➢ Not carrying newborn ➢ No Rooming-in	➢ Poorly breast feeding ➢ Poorly carrying of newborn ➢ Poorly Rooming-in	➢ Breast feeding is well established ➢ Safe handling of newborn ➢ Presence of Rooming-in
14.	**Length of labor**	➢ Extended day of delivered the baby	➢ Extended hours to delivered the baby	➢ Delivered expected hours

APPENDIX- XV

CLINICAL PATHWAY FOR PARTURIENT MOTHERS

Introduction

Health-care professionals frequently request systematic evidence-based guidance to facilitate decision-making in the provision of clinical care. They also need adequate support from hospital management to lead changes in practice. One approach to the provision of such guidance is the use of clinical pathways as an implementation tool. Clinical pathways are structured multidisciplinary care plans containing detailed essential steps in the care of patients with specific clinical problems. They are often developed by translating guidelines into local protocols for application in clinical practice. Although clinical pathways are being used worldwide, evidence about their usefulness has been unclear. Review assesses the available evidence for the impact of use of clinical pathways on professional practice, patient outcomes (e.g. mortality, complications), length of hospital stay and hospital costs.

Meaning

Many synonyms exist for the term Clinical Pathways including: Integrated Care Pathways, Multidisciplinary pathways of care, Pathways of Care, Care Maps, and Collaborative Care Pathways.

Care Pathways can be viewed as algorithms in as much as they offer a flow chart format of the decisions to be made and the care to be provided for a given patient or patient group for a given condition in a step-wise sequence.

Historical approach

Clinical Pathways were introduced in the early 1990s in the UK and the USA, and are being increasingly used throughout the developed world. Clinical Pathways are structured, multidisplinary plans of care designed to support the implementation of clinical guidelines and protocols. They are designed to support clinical management, clinical and non-clinical resource management, clinical audit and also financial management. They provide detailed guidance for each stage in the management of a patient with a specific condition over a given time period, and include progress and outcomes details.

Clinical Pathways aim

1. To improve, in particular, the continuity and co-ordination of care across different disciplines and sectors.

Components

Clinical Pathways have four main components (Hill, 1994, Hill 1998)

- A timeline
- The categories of care or activities and their interventions

- ❖ Intermediate and long term outcome criteria
- ❖ The variance record (to allow deviations to be documented and analyzed)

Clinical Pathways differ from practice guidelines, protocols and algorithms as they are utilized by a multidisciplinary team and have a focus on the quality and co-ordination of care.

Selection Criteria

The following signals may indicate that it may be useful to commit resources to establish and implement a clinical pathway for a particular condition:

- Prevalent pathology within the care setting
- Pathology with a significant risk for patients
- Pathology with a high cost for the hospital
- Predictable clinical course
- Pathology well defined and that permits a homogeneous care
- Existence of recommendations of good practices or experts opinions
- Unexplained variability of care
- Possibility of obtaining professional agreement
- Multidisciplinary implementation
- Motivation by professionals to work on a specific condition

HENDERSON'S CONCEPTS OF ADL MODEL	LATEND PHASE	ACTIVE PHASE	TRANSITION PHASE	2nd STAGE OF LABOR	3rd STAGE OF LABOR	4th STAGE OF LABOR
Clinical Assessment	1.1 Completion of prenatal records 1.2 Review existing records 1.3 Physical assessment 1.4 Assess fetal viability	1.1Complete bed rest 1.2Constant supervision	1.1Complete bed rest 1.2Constant supervision	1.1Complete bed rest 1.2 arrangement for labor	1.1 perform Apgar at 1 and 5 min 1.2 Assess response to completion of child birth process, reaction of newborn	1.1 Assess perineum/episiotomy 1.2 Assess lochia 1.3 skin to skin contact
Breathing	2.1 Provide comfort environment 2.2 Relaxation measures	2.1 coach breathing techniques 2.2 Encourage effleurage 2.3 Assist in using relaxation techniques between contractions	2.1 coach breathing techniques 2.2 Reduce touch if increased sensitivity is noted	Encourage correct breathing during bearing down efforts	2.1Provide Good ventilated area 2.3Oral nasal Suctioning for baby	Provide warm environment for baby
Regulatory functions	3.1 BP,P,R q 30-60 min 3.2 T q 4hrs 3.3 UC q 30-60 min 3.4FHR q 30- 60	3.1 BP,P,R q 30min 3.2 T q 4hrs 3.3 UC q 15-30 min 3.4FHR q 15-30	3.1 BP,P,R q 30 min 3.2 T q 4hrs 3.3 UC q 10-15min 3.4FHR q15-	3.1 BP,P,R q 5-30 min 3.2 assess every contraction 3.3 Assess each bearing-down	BP,P,R q 15min	BP,P,R q 15min

	min 3.5 vaginal examination as needed to identify progress	min 3.5 vaginal examination as needed to identify progress	30min 3.5 vaginal examination as needed to identify progress	effort 3.4FHR q 5-15min 3.5 Vaginal show q 15min		
Nutrition	4.1 light foods and full liquids 4.2 Establish and maintain IV as ordered	4.1Provide nourishment as desired	4.1Provide clear liquids: sips, ice chips	4.1Maintain hydration	4.1Maintain hydration	4.1Assess for tolerance of per oral intake
Elimination	5.1Assess bladder and bowel pattern 5.2 Empty her bladder Q2H 5.3 Help the women ambulate to bathroom or offer bedpan	5.1Encourage voiding q2hrs	5.1Encourage voiding q2hrs	5.1Catheterize if needed 5.2 Insert catheter between contractions	5.1Check baby has passed urine and Meconium	5.1Assess bladder fullness Assist to bathroom
Position	6.1Emphasize upright position	6.1Assist with position changes	6.1Assist with position changes	6.1Help to use recommended positions that facilitate descent	6.1Assist to rest in position of comfort	6.1Assist with position changes
Comfort	7.1Provide hospital dress 7.2 provide privacy 7.3 put up side rails	7.1Use comfort measures desired by women 7.2 provide	7.1Use comfort measures according to	7.1Provide comfort measure as needed	7.1Provide pain relief as needed as needed	7.1Provide comfort measure as needed

	on bed 7.4 Diversion activities	privacy 7.3 put up side rails on bed 7.4Initiate hydrotherapy	acceptance level 7.2Continue hydrotherapy if effective			
Personal hygiene	8.1 perform basic hygiene measures	8.1Assist with hygiene, perineal care	8.1Change the wet clothes	8.1Change the wet clothes	8.1Provide hygiene measure to the baby and mother	8.1Change the wet clothes
Safety	9.1 Teach and provide safety measure	9.1provide safety measure	9.1provide safety measure	9.1provide safety measure	9.1provide safety measure	9.1provide safety measure
Communication	10.1Maintain IPR	10.1Maintain IPR	10.1Maintain IPR	10.1Maintain IPR	10.1Maintain IPR	10.1Maintain IPR
Spiritual	11.1Orient to the prayer hall	11.1Allow to prayer hall without disturbance	11.1Allow to prayer hall without disturbance	11.1Allow to pray	11.1Allow to pray	11.1Allow to pray
Activity	12.1 encourage Ambulation with support	12.1Ambulation with support	12.1Promote urge to push	12.1Promote urge to push	12.1Restricted activity	12.1Instruct mother in perineal care and pad changes
Emotional support	13.1 review birth plan 13.2 Review process of labor 13.3 Redemonstratebrea	13.1 provide feedback about performance 13.2 Reduce distractions during contractions	13.1 Provide continuous support 13.2 reduce distraction 13.3 role	13.1Follow non pharmacologica l treatment	13.1Follow non pharmacologica l treatment	13.1Encourage mother/family members to hold and touch infant Provide skin to

	thing techniques 13.4 Keep informed : progress, procedures	13.3Continue to keep informed	model care measures to assist partner 13.4 continue reassurance and keep informed			skin contact of mother
Health education	14.1Patient and family labor education 14.2 Family planning	14.1Reinforce breathing and relaxation technique 14.2Encourage support person involvement 14.3Provide explanation of labor progress	14.1Encourage support person involvement 14.2Provide explanation of labor progress	14.1Assist with pushing 14.2Encourage support person involvement	14.1Support parent/infant bonding 14.2Teach pericare	14.1Breastfeeding latch-on and positioning, if applicable 14.2Appropriate hand washing techniques 14.3Cough and deep breathing exercises 14.4Instruct in pain-relief techniques
Rest	15.1Adequate rest and sleep	15.1Adequate rest and sleep	15.1Adequate rest	15.1Adequate rest	15.1Adequate rest	15.1 adequate rest

APPENDIX – XVI

DATA CODE SHEET FOR NURSES

Demographical variables and Knowledge level of for nurses

AGE	**AGE (in years)**
	2.1 ≤ 21
	2.2 22 to 24
	2.3 25 to 29
	2.4 ≥ 30
REL	**Religion**
	3.1Hindu
	3.2Muslim
	3.3Christian
EDU	**Educational status**
	4.1ANM
	4.2Diploma in nursing
	4.3BSc nursing
	4.4Post certificate course
MS	**Marital status.**
	5.1Married
	5.2Single
TOR	**Type of the residential area**
	6.1Home
	6.2Hostel
YOE	**Years of experience**
	7.1≤ 1
	7.22
	7.33
	7.4≥ 4
IPM	**Income per month in Rupees**
	8.1< 5000
	8.25001-7500
	8.37501-10,000
	8.4> 10,001
IRCP	**Previous information acquired regarding clinical pathway**
	9.1Yes
	9.2No

SOI	**If yes, what was the source of information?**
	10.1Books
	10.2 Journals
	10.3 Magazines
	10.4colleagues
	10.5Previous work experience
SCO	**Scores**
LEV	**level of knowledge**

DATA CODE SHEET FOR PARTURIENT MOTHERS

Demographic variables and Obstetrical variables for Parturient mothers

AGE	**Age(IN YEARS)**		6.4≥ 30
	2.1≤ 20	**TOF**	**Type of the family**
	2.2 21 to 23		7.1Nuclear
	2.3 24 to 30		7. 2Joint
	2 .4 >30 yrs	**FA.IN**	**Income of the family**
REL	**Religion**		8.1 10, 0000 – 20,000
	3.1Hindu		8.2 20,001 – 40,000
	3.2Muslim		8.3 40,001- 60,000
	3.3Christian		8.4 > 60,000
EDU	**Education**	**GA**	**Gestational weeks**
	4.1Primary		1.1≤ 35
	4.2Secondary		1.236-37
	4.3 Graduate		1.338-39
	4.4 Post-graduate		1.4≥ 40
OCC	**Occupation**	**AN**	**Number of antenatal visits till date**
	5.1Working		2.1 No visit
	5.2Not working		2.21 to 4 times
AG M	**Age at marriage in years**		2.3>4 times
	6.1≤ 20		
	6.221-25		
	6.326-30		

ODP	**Order of pregnancy**
	3.1Primi gravida
	3.2Second gravida
	3.3Third gravida
	3.4Multi-gravida
TD	**Mode of delivery**
	4.1Normal vaginal delivery with episiotomy
	4.2Assisted forceps delivery
	4.3Assisted vacuum delivery
DOF	**Duration of 1st stage of labor**
	5.1 <10 hours
	5.2 10-14 hours
	5.3 >14 hours
DOS	**Duration of 2nd stage of labor**
	6.1 <1 hour
	6.2 1 hour – 2 hour
	6.3 >2hour
DOT	**Duration of 3rd stage of labor**
	7.1 <10 minutes
	7.2 10 -20 minutes
	7.3 > 20 minutes
DOH	**Duration of 4th stage of labor**
	8.1 1 hour
	8.2 2 hour
	8.3 3 hour
CO-M	**Co-morbidity**
	9.1H/O illness before pregnancy
	9.2H/O illness during pregnancy
	9.3No history
COM	**Complication arise during labour**
	10.1 Yes
	10.2 No

APPENDIX – XVII

MASTER CODE SHEET FOR NURSES

S. No	DEMOGRAPHIC VARIABLES									PRE-TEST		POST-TEST	
	AGE	REL	EDU	YOE	MS	TOR	IPM	IRCP	SOI	SCO	LEV	SCO	LEV
1	2	1	2	3	2	1	3	1	1	17	A	20	A
2	2	1	2	1	2	2	2	1	1	14	MA	21	A
3	1	3	1	1	2	2	1	1	1	14	MA	19	A
4	3	1	1	3	2	1	3	1	1	16	A	20	A
5	4	1	1	3	1	1	4	1	1	20	A	23	A
6	2	2	2	1	2	1	2	1	1	13	MA	21	A
7	2	1	2	2	3	2	3	1		16	A	21	A
8	2	1	2	2	2	2	2	2	1	12	MA	23	A
9	2	2	2	1	2	2	2	1	1	15	MA	23	A
10	2	1	2	1	2	2	2	2	1	10	IA	23	A
11	2	2	2	1	2	2	2	2	1	15	MA	23	A
12	2	2	2	2	2	2	2	2	1	17	A	23	A

MASTER CODE SHEET FOR PARTURIENT MOTHERS (CONTROL GROUP)

DEMOGRAPHIC VARIABLE							OBSTETRIC VARIABLE										PRACTISE SCORE - COMPONENT WISE																satisfaction score		Maternal Outcome	
AGE	REL	EDU	OCC	AG M	TOF	FA.IN	GA	AN	ODP	TD	DOF	DOS	DOT	DOH	CO-M	COM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	G.TOT	1STAGE TOT	2STAGE TOT	3STAGE TOT	4STAGE TOT	score	%	score	%
3	1	4	2	2	2	1	2	3	1	1	3	2	1	1	1	2	27	18	24	14	12	10	18	11	14	22	1	11	14	14	18	228	130	30	28	40	41	68.3	5	17.8
3	3	5	2	2	1	2	2	3	2	1	2	2	1	1	3	2	27	18	26	14	12	10	18	11	14	22	1	11	16	14	18	232	140	30	26	38	47	78.3	3	10.7
3	1	5	2	3	2	2	2	3	2	1	1	1	1	1	3	2	27	18	28	14	12	10	20	11	16	22	1	11	18	14	18	240	146	28	26	38	49	81.6	4	14.3
3	1	5	2	2	1	2	1	3	2	1	1	1	1	1	3	2	27	18	28	14	12	10	20	11	16	22	1	11	20	14	18	242	148	30	26	38	53	88.3	2	7.1
3	1	5	2	2	2	2	2	3	1	2	1	1	1	1	3	2	27	18	24	14	12	10	18	11	14	22	1	11	16	14	18	230	138	30	26	38	53	88.3	2	7.1
3	1	4	2	2	2	2	2	3	1	2	1	1	1	1	3	2	27	18	28	14	12	10	20	11	16	22	1	11	20	14	18	242	148	30	26	38	51	85	2	7.1
3	2	4	2	2	2	2	2	3	3	1	2	2	2	1	3	2	27	18	26	14	12	10	18	11	14	22	1	11	16	14	18	232	140	30	26	38	53	88.3	4	14.3
3	1	3	2	2	1	1	2	3	1	2	1	1	1	1	3	2	27	18	28	14	12	10	20	11	16	22	1	11	18	14	18	240	146	28	26	38	45	75	3	10.7
4	1	5	2	2	2	1	1	3	2	2	3	2	1	1	2	2	27	18	24	14	12	10	18	11	4	22	1	11	16	14	18	230	138	30	26	38	42	70	4	14.3
3	1	5	1	2	2	2	2	3	1	2	1	1	1	1	3	2	27	18	28	14	12	10	20	11	16	22	1	11	20	14	18	242	148	30	26	38	49	81.6	3	10.7
3	1	5	2	2	1	2	1	3	1	1	1	1	1	1	3	2	27	18	26	14	12	10	18	11	14	22	1	11	16	14	18	232	140	30	26	38	41	68.3	4	14.3
3	3	6	1	2	2	3	2	3	1	2	2	2	1	1	3	2	27	18	28	14	12	10	20	11	16	22	1	11	18	14	18	240	146	28	26	40	42	70	3	10.7
3	1	6	1	2	2	3	3	3	1	2	2	2	1	1	3	2	27	18	28	14	12	10	22	11	16	22	1	11	22	14	18	236	140	28	28	40	44	73.3	2	7.1
2	3	5	2	2	2	2	2	3	1	2	1	2	1	1	3	2	27	18	26	14	12	10	20	11	16	22	1	11	18	14	18	238	138	32	28	40	40	66.7	2	7.1
3	1	5	2	3	2	2	2	3	1	2	2	2	1	1	1	2	27	18	24	14	12	10	20	11	16	22	1	11	18	14	18	236	140	28	28	40	47	78.3	2	7.1
2	4	4	2	2	2	2	2	3	1	2	2	2	1	1	3	2	27	18	26	14	12	10	20	11	16	22	1	11	18	14	18	238	138	32	28	40	53	88.3	4	14.3
3	1	6	1	2	2	2	2	3	1	1	1	1	1	1	3	2	27	18	24	14	12	10	20	11	16	22	1	11	18	14	18	236	140	30	28	38	51	85	3	10.7
4	1	3	2	2	1	2	2	3	2	1	1	1	1	1	3	2	27	18	26	14	12	10	18	11	14	22	1	11	18	14	18	232	140	28	26	38	42	70	4	14.3
2	2	4	2	2	2	2	2	3	1	1	1	1	1	1	3	2	27	18	26	14	12	10	18	11	14	22	1	11	18	14	18	240	146	30	26	38	41	68.3	4	14.3
4	1	6	1	3	1	3	1	3	3	1	2	2	1	1	3	2	27	18	24	14	12	10	20	11	16	22	1	11	18	14	18	236	140	28	28	40	53	88.3	2	7.1
3	1	5	2	2	2	2	2	3	1	1	2	1	1	1	3	2	27	18	30	14	12	10	20	11	16	22	1	11	18	14	18	242	148	30	26	38	49	81.6	3	10.7
4	1	5	1	3	1	3	1	3	1	2	2	2	1	1	3	2	27	18	28	14	12	10	20	11	16	22	1	11	20	14	18	242	148	30	26	38	51	85	3	10.7
3	1	5	2	2	1	2	2	3	2	1	2	2	1	1	3	2	27	18	26	14	12	10	18	11	14	22	1	11	16	14	18	232	140	28	26	38	51	85	4	14.3
3	3	4	2	2	1	2	3	3	1	1	2	2	1	1	3	2	27	18	24	14	12	10	18	11	14	22	1	11	14	14	18	228	130	30	28	40	53	88.3	1	3.5
3	1	5	2	2	2	2	1	3	1	1	2	2	1	1	2	2	27	18	24	14	12	10	18	11	14	22	1	11	16	14	18	230	138	28	26	38	53	86.7	1	3.5
3	1	5	2	2	2	2	2	3	2	2	1	1	1	1	3	2	27	18	28	14	12	10	20	11	16	22	1	11	18	14	18	240	146	30	26	38	42	70	1	3.5
3	2	4	2	2	2	2	3	3	2	1	2	2	1	1	2	1	27	18	28	14	12	10	18	11	14	22	1	11	16	14	18	234	142	28	26	38	49	81.6	2	7.1
3	2	5	1	3	1	3	1	3	1	2	2	2	1	1	2	1	27	18	24	14	12	10	18	11	14	22	1	11	14	14	18	238	138	32	28	40	47	78.3	2	7.1
3	1	5	2	2	2	2	1	3	3	1	1	1	1	1	3	2	27	18	24	14	12	10	18	11	14	22	1	11	16	14	18	230	138	28	26	38	53	88.3	2	7.1
4	1	4	2	2	2	2	1	3	2	2	1	1	1	1	3	2	27	18	24	14	12	10	18	11	14	22	1	11	17	14	18	229	131	30	28	40	41	68.3	3	10.7

MASTER CODING SHEET FOR PARTURIENT MOTHER(EXPERIMENTAL GROUP)

DEMOGRAPHIC VARIABLE							OBSTETRIC VARIABLE										PRACTISE SCORE - COMPONENT WISE																satisfaction score		Maternal Outcome	
AGE	REL	EDU	OCC	AG M	TOF	FA.IN	GA	AN	ODP	TD	DOF	DOS	DOT	DOH	CO-M	COM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	G.TOT	1STAGE TOT	2STAGE TOT	3STAGE TOT	4STAGE TOT	score	%	score	%
3	1	5	2	2	2	2	1	3	1	1	1	1	1	1	3	2	29	19	28	14	20	12	26	16	20	24	5	14	31	28	18	315	176	45	38	56	56	93.3	0	0
2	1	5	2	2	1	2	2	3	1	1	1	1	1	1	3	2	29	19	22	14	20	12	26	14	18	24	5	14	31	28	18	294	161	43	40	50	58	96.6	0	0
3	1	5	2	3	2	2	1	3	1	2	2	2	1	1	3	2	29	19	20	14	21	12	26	14	18	24	5	14	31	28	18	293	160	43	39	51	59	98.3	1	3.5
3	1	6	1	3	1	2	2	3	1	1	1	1	1	1	3	2	29	19	20	14	21	12	26	14	18	24	5	14	31	28	18	293	162	41	38	52	58	96.6	1	3.5
3	1	6	1	2	1	2	2	3	1	1	2	2	1	1	3	2	29	19	20	14	20	12	26	14	18	24	5	14	30	28	17	290	162	41	39	48	59	98.3	1	3.5
3	1	5	2	2	1	3	1	3	1	1	1	1	1	1	3	2	29	19	22	14	20	12	26	16	18	24	5	14	31	28	18	296	164	40	39	48	58	96.6	0	0
3	1	5	2	2	1	3	3	3	1	2	2	2	1	1	3	2	29	19	22	14	20	12	26	18	18	24	5	14	31	28	18	298	161	43	40	54	58	96.6	1	3.5
3	1	4	2	2	1	3	2	3	1	1	1	1	1	1	3	2	29	19	27	14	20	12	26	18	18	24	5	14	31	28	18	303	166	45	40	52	59	98.3	0	0
3	1	5	1	2	1	3	1	3	1	1	1	1	2	1	3	2	29	19	22	14	20	12	26	14	18	24	5	14	31	28	18	294	161	43	40	50	59	98.3	1	3.5
4	1	5	1	2	1	3	2	3	1	2	2	2	2	1	3	2	29	19	22	14	20	12	26	18	18	24	5	14	31	28	18	298	161	43	40	54	57	95	1	3.5
3	4	5	2	2	2	3	2	3	1	3	2	2	2	1	3	2	29	19	32	14	20	12	26	18	20	24	5	14	34	30	18	315	176	45	38	56	58	96.6	1	3.5
3	1	5	1	3	2	2	1	3	1	2	2	2	2	1	3	2	30	19	34	14	22	12	26	18	20	24	5	14	34	30	18	320	176	45	40	59	57	95	1	3.5
4	1	6	2	3	2	2	2	3	1	2	2	2	2	1	3	1	29	19	32	14	20	12	26	18	20	24	5	14	34	30	18	314	175	45	38	56	54	90	4	14.3
4	1	5	2	2	2	2	2	3	1	1	1	1	2	1	3	2	29	19	32	14	20	12	26	18	20	24	5	14	34	30	18	313	174	45	39	55	57	95	0	0
3	3	5	2	2	2	3	1	3	1	2	2	1	2	1	3	2	29	19	22	14	20	12	26	18	18	24	5	14	31	28	18	298	161	43	40	54	57	95	0	0
3	4	6	2	2	2	3	2	3	1	1	2	2	1	1	3	2	29	19	22	14	20	12	26	14	18	24	5	14	31	28	18	294	161	43	40	50	57	95	1	3.5
3	1	5	2	2	1	2	2	3	1	1	1	1	2	1	1	2	29	19	22	14	20	12	26	18	18	24	5	14	31	28	18	298	161	43	40	54	56	93.3	1	3.5
2	1	5	2	2	1	2	2	3	1	1	1	1	2	1	3	2	29	19	21	14	20	12	26	14	18	24	5	14	30	28	17	291	159	41	40	51	57	95	0	0
4	1	5	2	2	2	2	2	3	1	1	1	1	2	1	3	2	29	19	22	14	20	12	26	16	18	24	5	14	31	28	18	296	163	43	40	50	56	93.3	0	0
3	1	5	2	3	2	2	1	3	1	1	2	2	1	1	3	2	29	19	20	14	20	12	26	14	18	24	5	14	30	28	18	290	162	41	39	48	55	91.6	1	3.5
3	1	5	1	2	1	2	2	3	1	2	2	2	1	1	3	2	29	19	22	14	20	12	26	14	18	24	5	14	31	28	18	294	161	43	40	50	56	93.3	1	3.5
3	1	5	2	2	2	2	2	3	1	1	2	2	1	1	3	2	29	19	22	14	20	12	26	18	18	24	5	14	30	28	18	297	160	43	40	54	55	91.6	1	3.5
3	1	5	2	2	1	2	1	3	1	2	2	2	1	2	3	1	29	19	22	14	20	12	26	16	18	24	5	14	31	28	18	296	163	43	40	51	54	90	4	14.3
3	3	5	1	3	1	2	2	3	1	2	1	1	1	1	3	2	29	19	22	14	20	12	26	18	18	24	5	14	31	28	18	298	161	43	40	54	55	91.6	0	0
3	3	5	2	3	2	2	2	3	1	1	1	1	1	1	3	2	29	19	22	14	20	12	26	17	18	24	5	14	31	28	18	297	160	43	40	54	56	93.3	0	0
4	1	5	2	3	2	2	1	3	1	2	1	1	1	1	3	2	29	19	27	14	20	12	26	16	18	24	5	14	31	28	18	301	164	45	40	52	56	93.3	0	0
4	1	5	2	2	1	2	1	3	1	2	1	1	1	1	3	2	30	19	34	14	22	12	26	18	20	24	5	14	34	30	18	320	176	45	40	59	56	93.3	0	0
4	1	5	2	2	1	2	2	3	1	1	1	1	1	1	3	2	29	19	32	14	20	12	26	18	20	24	5	14	34	30	18	315	176	45	38	56	55	91.6	0	0
3	1	5	2	2	2	2	1	3	1	2	2	2	1	1	3	2	29	19	32	14	20	12	26	18	19	24	5	14	34	30	18	314	175	45	38	56	55	91.6	1	3.5
3	1	5	2	2	2	2	3	3	1	1	2	2	1	1	3	2	29	19	22	14	20	12	26	16	18	24	5	14	31	29	18	299	162	43	40	54	53	88.3	1	3.5